

**INFORMATION TO OFFERORS OR QUOTERS
SECTION A - COVER SHEET**

PLEASE RETURN COMPLETED FORM TO THE ADDRESS IN BLOCK 4 BELOW.

1. SOLICITATION NUMBER: DTFAWA-08-R-00023	2. (X one) <input type="checkbox"/> a. Invitation for Bid (IFB) <input checked="" type="checkbox"/> b. Request for Proposal (RFP) <input type="checkbox"/> c. Request for Quotation (RFQ)	3. DATE/TIME RESPONSE DUE: 12 August 2008
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INSTRUCTIONS

Note: The provision entitled "Required Central Contractor Registration" applies to all solicitations.

A. If you are not submitting a response, complete the information in Blocks 9 through 11 and return to the issuing office in Block 4 unless a different return address is indicated in Block 7.

B. Offerors or quoters must include full, accurate, and complete information in their responses as required by this solicitation (including attachments). "Fill-Ins" are provided in solicitation documents. Examine the entire solicitation carefully.

C. Offerors or quoters must plainly mark their responses with the Solicitation Number and the date and local time for receipt of proposals that is in the solicitation document.

D. Information regarding the timeliness of response is addressed in the provision of this solicitation entitled either "Late Submissions, Modifications, and Withdrawals of Bids" or Instructions to Offerors - Competitive Acquisition".

4. ISSUING OFFICE Federal Aviation Administration 800 Independence Avenue, S.W. Washington, DC 20591	5. ITEMS TO BE PURCHASED Surge Protective Devices (SPD)/Transient Voltage Surge Suppressors (TVSS)
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6. PROCUREMENT INFORMATION

<input checked="" type="checkbox"/> X	a. THIS PROCUREMENT IS UNRESTRICTED.
	b. THIS PROCUREMENT IS <u>100</u> % SET-ASIDE FOR SMALL BUSINESS.
	c. THIS PROCUREMENT IS _____ % SET-ASIDE FOR VERY SMALL BUSINESS.
	d. THIS PROCUREMENT IS _____ % SET-ASIDE FOR SDVOSB CONCERNS.

7. ADDITIONAL INFORMATION:

8. POINT OF CONTACT FOR INFORMATION

a. NAME: Ken Carter, AJA471-25	b. ADDRESS: Federal Aviation Administration 800 Independence Ave., S.W. Washington, DC 20591
c. TELEPHONE NUMBER: 202-267-3012	
d. EMAIL ADDRESS: kenneth.m.carter@faa.gov	

9. REASONS FOR NO RESPONSE (X all that apply)

<input type="checkbox"/>	a. CANNOT COMPLY WITH SPECIFICATIONS
<input type="checkbox"/>	b. UNABLE TO IDENTIFY THE ITEM(S)
<input type="checkbox"/>	c. CANNOT MEET DELIVERY REQUIREMENT
<input type="checkbox"/>	d. DO NOT REGULARLY MANUFACTURE OR SELL THE TYPE OF ITEMS INVOLVED
<input type="checkbox"/>	e. OTHER (Specify)

10a. COMPANY NAME	10b. ADDRESS (Include Zip Code)
10c. ACTION OFFICER	

(1) Typed or Printed Name (Last, First Middle Initial)	(2) Title
(3) Signature:	(4) Date

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS <small>OFFEROR TO COMPLETE BLOCKS 12, 16, 22, 23, & 28</small>				1. REQUISITION NUMBER		PAGE OF 1 59	
2. CONTRACT NO.		3. AWARD/ EFFECTIVE DATE		4. ORDER NUMBER		5. SOLICITATION NUMBER DTFAWA-08-R-00023	
						6. SOLICITATION ISSUE DATE 07/07/2008	
7. FOR SOLICITATION INFORMATION CALL:		a. NAME Kenneth Carter		b. TELEPHONE NUMBER (No collect calls) 202-267-3012		8. OFFER DUE DATE/LOCAL TIME 08/12/2008 1400 ET	
9. ISSUED BY		CODE ASU0370-ARA		10. THIS ACQUISITION IS <input type="checkbox"/> UNRESTRICTED <input checked="" type="checkbox"/> SET ASIDE 100.00% FOR <input checked="" type="checkbox"/> SMALL BUSINESS SIC: 335999 SIZE STANDARD: 500		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE	
Contract Systems Support Branch Federal Aviation Administration 800 Independence Avenue SW Washington DC 20591						12. DISCOUNT TERMS	
14. DELIVER TO		CODE		15. ADMINISTERED BY		CODE ASU370-ARA	
Logistics Support Facility, Bldg 2 FAA Mike Monroney Aeronautical Center 6500 S. MacArthur Blvd. Oklahoma City OK 73169				Contract Systems Support Branch Federal Aviation Administration 800 Independence Avenue SW Washington DC 20591			
16a. CONTRACTOR/ OFFEROR		CODE		17a. PAYMENT WILL BE MADE BY		CODE	
TELEPHONE NO.				17b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 17a. UNLESS BLOCK BELOW IS CHECKED. <input type="checkbox"/> SEE ADDENDUM			
<input type="checkbox"/> 16b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER							
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES			20. QUANTITY	21. UNIT	22. UNIT PRICE	23. AMOUNT
	Please direct all invoices to address shown below: FAA AAC ACCTG OFC Continued ...						
24. ACCOUNTING AND APPROPRIATION DATA						25. TOTAL AWARD AMOUNT (For Contract Authority Use Only)	
26. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN <u>3</u>				27. AWARD OF CONTRACT: REFERENCE _____ OFFER			
<input checked="" type="checkbox"/> COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.				<input type="checkbox"/> DATED _____ YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN IS ACCEPTED AS TO ITEMS:			
28a. SIGNATURE OF OFFEROR/CONTRACTOR				29a. CONTRACT AUTHORITY (SIGNATURE OF CONTRACTING OFFICER)			
28b. NAME AND TITLE OF SIGNER (Type or Print)				28b. NAME OF CONTRACTING OFFICER (Type or Print)		29c. DATE SIGNED	
				Brian D. Anderson			
30a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED				31. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. VOUCHER NUMBER	
32b. SIGNATURE OF AUTHORIZED CONTRACT AUTHORITY REPRESENTATIVE				34. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		33. AMOUNT VERIFIED CORRECT FOR	
32c. DATE				36. S/R ACCOUNT NUMBER		37. S/R VOUCHER NUMBER	
						38. PAID BY	
39a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT				40a. RECEIVED BY (Print)			
39b. SIGNATURE AND TITLE OF CERTIFYING OFFICER				40b. RECEIVED AT (Location)			
39c. DATE				40c. DATE REC'D (YY/MM/DD)		40d. TOTAL CONTAINERS	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	DTEAWA-08-R-00023	2	59

NAME OF OFFEROR OR CONTRACTOR

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DOT/FAA AMZ-110 PO BOX 25710 OKLAHOMA CITY OK 73125 Period of Performance: 10/01/2008 to 09/30/2009				

PART I - SECTION B
SUPPLIES/SERVICES & PRICE/COST

This is a Screening Information Request (SIR) for an INDEFINITE QUANTITY CONTRACT for supplies specified herein. The quantities of supplies specified in the schedule are estimates only and are not purchased by this SIR. Per AMS Clause 3.2.4-16, Ordering, any supplies to be furnished under the resulting contract shall be ordered by issuance of delivery orders by the activities designated in the clause. Such orders may be issued from the effective date of the award of the basic contract through a date exactly 365 days after the date of the award. The SIR contains an option to extend the term of the contract for four (4) optional one-year periods as described at AMS Clause 3.2.4-35.

Delivery Requirements:

Maximum Order Quantity: 301 - 500 90 calendar days after receipt of order (DARO)

Estimated Order Quantity: 101 - 300 60 DARO

Minimum Order Quantity: 100 30 DARO

*See AMS Clause 3.2.4-20, Indefinite Quantity (July 1996).

**Order limitations are described at AMS Clause 3.2.4-17.

FOB: Destination

TO BE COMPLETED BY ALL OFFERORS

Year	Est. Qty	Unit Issue	Unit Price	Total Price
BASE YEAR:				
CLIN 0001	0 - 100	EA	_____	_____
Service Entrance 480Y/277	101 - 300	EA	_____	_____
	301 - 500	EA	_____	_____
CLIN 0002	0 - 100	EA	_____	_____
Service Entrance 208Y/120	101 - 300	EA	_____	_____
	301 - 500	EA	_____	_____
CLIN 0003	0 - 100	EA	_____	_____
Feeder & Branch Panel 208Y/120	101 - 300	EA	_____	_____
	301 - 500	EA	_____	_____
CLIN 0004	0 - 100	EA	_____	_____
Service Entrance 480	101 - 300	EA	_____	_____
	301 - 500	EA	_____	_____
CLIN 0005	0 - 100	EA	_____	_____
Service Entrance 120/240	101 - 300	EA	_____	_____
	301 - 500	EA	_____	_____

CLIN 0006	0 - 100	EA		
Feeder & Branch Panel 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 0007	0 - 100	EA		
Service Entrance 380Y/220	101 - 300	EA		
	301 - 500	EA		

**TOTAL MAXIMUM (BASE YEAR) CONTRACT
VALUE :**

OPTION YEAR - 1

CLIN 1001	0 - 100	EA		
Service Entrance 480Y/277	101 - 300	EA		
	301 - 500	EA		
CLIN 1002	0 - 100	EA		
Service Entrance 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 1003	0 - 100	EA		
Feeder & Branch Panel 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 1004	0 - 100	EA		
Service Entrance 480	101 - 300	EA		
	301 - 500	EA		
CLIN 1005	0 - 100	EA		
Service Entrance 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 1006	0 - 100	EA		
Feeder & Branch Panel 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 1007	0 - 100	EA		
Service Entrance 380Y/220	101 - 300	EA		
	301 - 500	EA		

**TOTAL MAXIMUM (OPTION YEAR - 1) CONTRACT
VALUE :****OPTION YEAR - 2**

CLIN 2001	0 - 100	EA		
Service Entrance 480Y/277	101 - 300	EA		
	301 - 500	EA		
CLIN 2002	0 - 100	EA		
Service Entrance 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 2003	0 - 100	EA		
Feeder & Branch Panel 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 2004	0 - 100	EA		
Service Entrance 480	101 - 300	EA		
	301 - 500	EA		
CLIN 2005	0 - 100	EA		
Service Entrance 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 2006	0 - 100	EA		
Feeder & Branch Panel 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 2007	0 - 100	EA		
Service Entrance 380Y/220	101 - 300	EA		
	301 - 500	EA		

**TOTAL MAXIMUM (OPTION YEAR - 2) CONTRACT
VALUE :****OPTION YEAR - 3**

CLIN 3001	0 - 100	EA		
Service Entrance 480Y/277	101 - 300	EA		
	301 - 500	EA		
CLIN 3002	0 - 100	EA		
Service Entrance 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 3003	0 - 100	EA		
Feeder & Branch Panel 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 3004	0 - 100	EA		
Service Entrance 480	101 - 300	EA		
	301 - 500	EA		

CLIN 3005	0 - 100	EA		
Service Entrance 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 3006	0 - 100	EA		
Feeder & Branch Panel 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 3007	0 - 100	EA		
Service Entrance 380Y/220	101 - 300	EA		
	301 - 500	EA		

TOTAL MAXIMUM (OPTION YEAR - 3) CONTRACT VALUE :

OPTION YEAR - 4

CLIN 4001	0 - 100	EA		
Service Entrance 480Y/277	101 - 300	EA		
	301 - 500	EA		
CLIN 4002	0 - 100	EA		
Service Entrance 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 4003	0 - 100	EA		
Feeder & Branch Panel 208Y/120	101 - 300	EA		
	301 - 500	EA		
CLIN 4004	0 - 100	EA		
Service Entrance 480	101 - 300	EA		
	301 - 500	EA		
CLIN 4005	0 - 100	EA		
Service Entrance 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 4006	0 - 100	EA		
Feeder & Branch Panel 120/240	101 - 300	EA		
	301 - 500	EA		
CLIN 4007	0 - 100	EA		
Service Entrance 380Y/220	101 - 300	EA		
	301 - 500	EA		

TOTAL MAXIMUM (OPTION YEAR - 4) CONTRACT VALUE :

TOTAL MAXIMUM (5 - YEAR) CONTRACT VALUE:

ANNUAL MAXIMUM CONTRACT QUANTITY: 1000 EA

ESTIMATED ANNUAL DEMAND QUANTITY: 500 EA

GUARANTEED MINIMUM QUANTITY (Applicable to Base Year Only): 100 EA

***Actual order quantities to be cited on individual Delivery Orders.

FIRST ARTICLE TESTING:

This Screening Information Request (SIR) has a Government first article test (FAT) requirement. The FAT will be performed in accordance with the attached "**Test**" Procedure Plan, which is included with this SIR (see Attachment 1, Test Procedures). Any accompanying literature or samples are to be sent to:

Federal Aviation Administration
Attn: Chauncey Woodland, AJW-222, Room 706D
800 Independence Ave, S.W.
Washington, DC 20591

Submission of FAT: 30 days after receipt of order (DARO).

Failure to provide First Article Testing Cost or to indicate First Articles are offered at no charge may result in your offer not being considered for award.

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
9906	Service Entrance C/High 480Y/277	2	EA	\$_____	\$_____
9907	Service Entrance C/High 208Y/120	2	EA	\$_____	\$_____
9908	Feeder & Branch Panel C/Low 208Y/120	2	EA	\$_____	\$_____

Delivery FOB: Destination

Inspection & Acceptance: Destination

Delivery Date for First Article: 30 DARO.

SHIP TO (First Article): Logistics Support Facility (LSF) Bldg 2
FAA Mike Monroney Aeronautical Center
6500 S. MacArthur Blvd.
Oklahoma City, OK 73169

PART I - SECTION C**Specification**

**Surge Protection Devices/Transient Voltage Surge Suppressors
For Installation at FAA AC Power Service Entrances,
Feeder Panelboards and Branch Circuit Panelboards**

1.0 SCOPE

This specification establishes the requirements for COTS 60 Hz AC Surge Protective Devices/Transient Voltage Surge Suppressors (SPD/TVSS) used for transient protection of FAA power distribution systems. The procurement of all new and replacement SPD/TVSS by the FAA shall be in accordance with the specification set forth in this document.

1.1 The manufacturer of the SPD/TVSS shall verify that the SPD/TVSS is not a prototype and that it has been field-installed and successfully operated for at least five years. The vendor shall have full responsibility for insuring that the SPD/TVSS meets or exceeds the specification given in this document.

1.2 The manufacturer shall provide a circuit diagram showing the internal components of the SPD/TVSS. Values of the circuit components are not required

1.3 This specification does not include the requirements for transient protection of signal, control and data lines.

2.0 APPLICABLE DOCUMENTS (not necessarily specifically referenced in this document)**2.1 Government Documents****2.1.1 FAA Orders**

Order 6950.19a	Practices and Procedures for Lightning Protection, Grounding, Bonding and Shielding Implementation
Order 6950.20b	Fundamental Considerations of Lightning Protection, Grounding, Bonding and Shielding

2.1.2 FAA Standards

FAA-STD-019e	Lightning and surge protection, grounding, bonding and shielding requirements for facilities and electronic equipment
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2.1.3 FAA Specifications

FAA-C-1217f	Electrical Work, Interior
FAA-G-2100g	Electronic Equipment, General Requirements
NAS-SS-1000	Functional and Performance Requirements for the National Airspace Air Traffic Control Element

2.1.4 Military handbook

MIL-HDBK-419A	Grounding, Bonding and Shielding for Electronic Equipment and Facilities
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2.2 Non-Government Documents

2.2.1 National Fire Protection Association (NFPA)

NFPA 70-2008	National Electrical Code (NEC)
NFPA 780-2008	Standard for the Installation of Lightning Protection Systems

2.2.2 Underwriters Laboratories, Inc. (UL)

UL 96	Lightning Protection Components
UL 96A	Installation Requirements for Lightning Protection Systems
UL 1449, Second Edition	Transient Voltage Surge Suppressors

2.2.3 Institute of Electrical and Electronic Engineers (IEEE)

ANSI/IEEE C62.41.1-2002	IEEE Guide on the Surge Environment in Low-Voltage (1000V and Less) AC Power Circuits
ANSI/IEEE C62.41.2-2002	IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000V and Less) AC Power Circuits
ANSI/IEEE C62.45-2002	IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

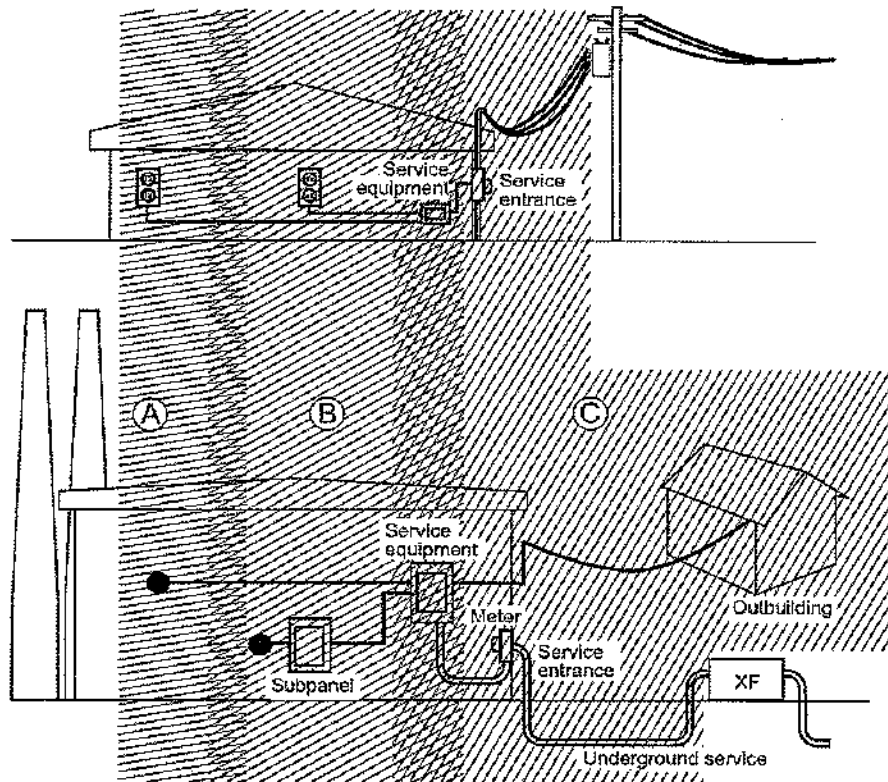
2.2.4 International Organization for Standardization (ISO)

ISO 9000	International quality standard that defines minimum requirements for a company's Quality Management System
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3.0 REQUIREMENTS

GENERAL: Surge Protective Devices/Transient Voltage Surge Suppressors (SPD/TVSS) used in FAA power distribution networks shall meet the requirements of FAA-STD-019e, "Lightning and surge protection, grounding, bonding and shielding requirements for facilities and electronic equipment", Sections 4.2.2.4. Each contending SPD will be independently tested for compliance with FAA Standard FAA-STD-019e, Sections 4.2.2.4 and also other requirements detailed in this document.

The types of SPD/TVSS required for FAA power distribution systems are designated below using the location categories established in IEEE/ANSI C62.41.2-2002, Figure 2, "The Concept of Location Categories And Transitions As Simplification Approach".



NOTE—There can be differences in the configuration and distance between the revenue meter and the service equipment. This schematic is only an example to illustrate the concept of location categories. [The National Electrical Code® (NEC®) (NFPA 70-2002) [B32] states in Article 230-70 “The service disconnecting means shall be installed at a readily accessible location either outside of a building or structure, or inside nearest point of entrance of the service conductors.”]

Figure 2—The concept of location categories and transitions as simplification approach

3.1.1 Types of SPD required for FAA power distribution systems

Designated Type	Nominal System Voltage (60 Hz AC)	System Type
1	480Y/277	4-Wire WYE with separate grounded conductor and equipment grounding conductor
2	208Y/120	4-Wire WYE with separate grounded conductor and equipment grounding conductor

3	208Y/120	4-Wire WYE with separate grounded conductor and equipment grounding conductor
4	480	3-Wire WYE solidly grounded
5	120/240	3-Wire, Single-phase, with separate grounded conductor and equipment grounding conductor.
6	120/240	3-Wire, Single-phase, with separate grounded conductor and equipment grounding conductor.
7	380Y/220	4-Wire WYE with separate grounded conductor and equipment grounding conductor

3.1.2 Components: The SPD/TVSS shall be a combination of solid-state circuits, varistors, or other devices and shall meet the requirements provided in this paragraph and its subparagraphs. Protection modes will be provided between all lines and between neutral (where provided) and ground.

3.1.3 Conduit sealing: The conduit connecting the SPD/TVSS enclosure to the Service Disconnecting Means (SDM) enclosure shall be sealed with a UL-listed nonflammable medium to prevent soot from entering the SDM enclosure in the event of SPD/TVSS failure.

3.1.4 SPD/TVSS Device Requirements

3.1.4.1 Listing: SPD/TVSS shall be listed in accordance with UL 1449, Second Edition.

3.1.4.2 Packaging: All components comprising a SPD/TVSS shall be packaged in a single National Electrical Manufacturers Association (NEMA) Type 4 steel enclosure. The enclosure door shall be hinged and electrically bonded with a bonding jumper to the enclosure

3.1.4.3 External Mounting: SPD/TVSS enclosures shall accommodate wiring installations employing 1½" rigid metal conduit (RMC) without affecting the performance of the SPD/TVSS.

3.1.4.4 Internal Mounting: SPD/TVSS enclosed within panelboards or switchgear enclosures shall be allowed, provided the integrated SPD/TVSS and panelboard or switchgear is UL listed/recognized as components and as an assembly.

3.1.4.5 Encapsulation: Encapsulation of the SPD/TVSS using potting or other materials Shall be allowed provided the manufacturer satisfactorily verifies its performance benefits to the FAA and also satisfactorily demonstrate that the use of such material does not present any potential hazards such as fire, smoke and chemical fumes, etc.

3.1.4.6 Accessibility: All SPD/TVSS components must be accessible for inspection by qualified FAA personnel. Fuses, lights, fuse wires, and arrester elements or components shall be readily accessible for inspection and replacement.

3.1.4.7 Connections: Heavy duty, threaded bolts or studs shall be provided for all input and output connections of the SPD/TVSS. SPD/TVSS terminals shall be suitable for connecting to corresponding terminals of the service disconnecting means with insulated copper conductors: 1/0 AWG (minimum) for service entrance and 2 AWG (minimum) for feeder/branch panelboards. Connections shall be made with UL-listed connectors identified for the wire size and type used.

3.1.4.8 Interior Space: The interior enclosure space shall be such that conductors can be routed as short and direct as possible, without loops, sharp bends or kinks.

3.1.4.9 Electrical Isolation: The SPD/TVSS phase and neutral terminals, when not connected, shall be electrically isolated from the enclosure by a minimum of 10 Megohms resistance measured at 100VDC.

3.1.4.10 Installation/Maintenance Instructions: Manufacturers shall supply clear installation and maintenance instructions with wiring diagram for each SPD/TVSS. Vendor will identify all corrective and preventative maintenance tasks in maintenance instructions.

3.1.5 Service entrance SPD requirements: A facility power SPD/TVSS rated for the load side of the facility SDM shall be provided at any facility penetration (entrance) and between the load side of an engine generator transfer switch and the first feeder panelboard.

3.1.6 Feeder/Branch Panelboard SPD requirements: SPD/TVSS shall be installed on all panelboards providing service to NAS operational equipment or supplying exterior circuits. Examples of exterior circuits include obstruction lights, convenience outlets, guard shacks, security systems, electric gates and feeds to other facilities.

3.1.6.1 Overcurrent Protection for Feeder or Branch Panelboard SPD/TVSS: All feeder or branch panelboard SPD/TVSS shall be provided with an overcurrent device. Examples of this overcurrent device include a fuse or a circuit breaker fitted internally to the SPD/TVSS or fitted to the panelboard for the sole use of the SPD/TVSS.

3.1.6.1.1 The overcurrent device shall not increase the clamp voltage of the SPD/TVSS by greater than 5% and shall pass the surge current levels listed in **Error! Reference source not found.** up to the 40kA level without opening.

3.1.6.1.2 All SPD/TVSS overcurrent devices, both internal and external to the SPD/TVSS, shall be properly rated and coordinated with system short circuit current ratings in accordance with the NEC.

3.1.6.1.3 All SPD/TVSS overcurrent devices shall either be field re-settable or replaceable.

3.1.6.1.4 Vendor shall recommend overcurrent device(s) which complies with sections 3.1.6.1.1 through 3.1.6.1.3 above.

3.2 SPD/TVSS OPERATIONAL CHARACTERISTICS:

3.2.1 General: The required minimum functional and operational characteristics of the SPD/TVSS are given in **Error! Reference source not found.**, Table II, and Table III. Other operational characteristics include the following:

3.2.1 Maximum Continuous Operating Voltage (MCOV): The MCOV shall not be less than 10 percent above the nominal system voltage. The MCOV is the maximum RMS voltage an SPD/TVSS will withstand at its maximum operating temperature continuously without degradation or change to any of its parameters greater than +/-10%.

3.2.2 DC Leakage Current: The DC leakage current shall be less than 1mA for voltages at or below $1.414 \times \text{MCOV VDC}$.

3.2.4 Clamp (discharge) Voltage: The SPD/TVSS clamp (discharge) voltage is the maximum voltage that appears across SPD/TVSS output terminals while conducting surge currents. This voltage, measured at 3kA with an 8/20 microsecond waveform, shall not change by more than 10 percent over the operating life (as defined in Table I, "Surge Current Lifetime Requirements") of the SPD/TVSS.

3.2.5 Overshoot Voltage: Overshoot voltage shall not exceed twice the SPD/TVSS clamp voltage for more than 10 nanoseconds. The overshoot voltage is the surge voltage level that appears across the SPD/TVSS terminals before the device turns on and clamps the surge to the specified voltage level.

3.2.6 Self-restoring capability: The SPD/TVSS shall automatically return to the OFF state (non-conducting) when the line voltage returns to normal after a surge dissipation.

3.2.7 Operating lifetime: The SPD/TVSS shall safely dissipate the number and amplitude of surges listed in Table I, "Surge Current Lifetime Requirements"

3.2.8 In-line inductors: In-line inductance, other than that normally caused by routing conductors, is not permitted in the SPD/TVSS.

3.2.9 Fusing: Any fuses that are part of the SPD/TVSS installation shall be able to pass all surge currents specified in **Error! Reference source not found.** without opening.

3.2.10. Surge Levels: **Error! Reference source not found.** defines line-to-ground, line-to-neutral, neutral to ground,

and line-to-line surge current amplitudes and number of occurrences that the SPD/TVSS shall withstand. Each level of surge current and the corresponding surge number represents a single lifetime of an SPD/TVSS. In this table, the 8/20 μ s wave form defines a transient reaching peak value in 8 μ s and decaying to 50 percent of peak value 20 μ s after inception. The SPD/TVSS shall be able to tolerate surges of shorter duration without malfunction.

Table I. Surge Current Lifetime Requirements

Surge Current Amplitude: 8/20 μ s Waveform	Surge Number Lifetime: Any Facility Entrance	Surge Number Lifetime: Feeder and Branch Panelboards
10kA	1500	1000
20kA	700	500
30kA	375	250
40kA	50	25
50kA	8	1
60kA	6	
70kA	4	
100kA	2	
200kA	1	

3.2.11 Impulse clamp voltage change: Any change greater than 10% in the 8/20 μ s clamping voltage at 3kA during service or when the pre-life/service test and the post-life or in-service test results are compared is a device failure. The pre-life test value shall be taken as the 100% value.

3.2.12 RMS voltage change: Any change greater than 10% in the RMS voltage required to drive 1mA RMS through the device when the pre life/service test and the post-life or in-service test results are compared is a device failure. The pre- life test value will be taken as the 100% value.

3.2.13 DC voltage change: Any change greater than 10% in the DC voltage required to drive 1mA DC through the device when the pre-life/service test and the post-life or in-service test results are compared is a device failure. The pre- life test value will be taken as the 100% value.

3.2.14 Slope Resistance: The Slope Resistance (R_{slope}) specifies a region on the SPD/TVSS characteristic where it is possible to ensure device coordination. The Slope Resistance (the slope of the voltage/current characteristic of the SPD in its linear region) shall be calculated from the formula below:

$$R_{\text{slope}} = (V_{10} - V_1)/9000$$

Where V_{10} = the clamping voltage measured at 10kA 8/20 μ s
And Where V_1 = the clamping voltage measured at 1kA 8/20 μ s

The values of V_{10} and V_1 used in the calculation of R_{slope} will be the absolute values as measured and not as a calculated value. The slope values shall conform to Table II.

Table II.
Entrance, Feeder, and Branch Panelboards Slope Resistance Requirements

Location	Slope Resistance
Any Facility Entrance	$\leq 8 \text{ m}\Omega$ (desired)
Feeder and Branch Panelboards	$30 \text{ m}\Omega \pm 15 \text{ m}\Omega$ (desired)

3.2.15 3kA protection voltage, V3: The voltages that must be achieved during testing at 3kA with an 8/20 μ s current impulse are shown in Table III. All voltages shall be measured at the device terminals.

Table III. Protection Voltages at 3kA

Location	System Voltage	V3	Limit
Any Facility Entrance	208Y/120 120/240	400 L-N, L-G 700 L-L	Maximum
Any Facility Entrance	480Y/277	700 L-L, L-G	Maximum
Any Facility Entrance	480V	1200 L-L, L-G	Maximum
Feeder and Branch panelboards	208Y/120 120/240V	475 L-N, L-G 775 L-L	$\pm 45\text{V}$
Feeder and Branch panelboards	380Y/220	1275 L-L, L-G	$\pm 45\text{V}$

3.2.16 Indicator Lamps: Indicator lamps shall be provided for each phase on the SPD/TVSS enclosure cover. The indicator lamps shall visually indicate normal system condition (power applied to the SPD/TVSS with all component fuses intact). If indicator lamps used have a service life of less than 50,000 hours, then two lamps per phase shall be provided.

4.0 QUALITY ASSURANCE PROVISIONS

4.1 Quality System Requirements

4.1.1 The SPD/TVSS vendor shall demonstrate that the SPD/TVSS manufacturer is ISO 9000 compliant.

4.1.2 The SPD/TVSS shall be factory assembled, wired and tested prior to shipment to the job site.

4.1.3 Material evaluation: The SPD/TVSS manufacturer shall provide verifying data to show that all materials that become part of the finished product are in accordance with the specifications in this document.

4.1.4 Quality Conformance Evaluation: Quality conformance evaluations will be used to verify that the SPD/TVSS meets the requirements specified in this document. Quality conformance evaluation may include, but is not be limited to, visual inspection and functional testing.

4.2 Requirements Verification Matrix

The requirements in section 3 shall be verified by demonstration, inspection, testing, or analysis as listed in Appendix I, "Requirements Verification Matrix". Certified documentation of previous demonstration, inspection, testing or analysis may be acceptable as verification of any item on the list.

The following definitions apply to the Verification Matrix in Appendix I:

- (1) Demonstration (D): Verifying the presence of a function or capability in an item by displaying the results of the function being performed. This activity is similar to testing, as it requires a formal procedure, but no quantitative data is recorded.
- (2) Testing (T): Verifying the presence of a function or capability in an item by performing a formal procedure to collect quantitative data in a controlled environment.
- (3) Analysis (A): Verifying the presence of a function or capability in an item by examining the action performed using mathematical, physical or chemical principles
- (4) Inspection (I): Verifying the required characteristics by means of observation. Observation includes seeing with the aid of tools that magnify.

Appendix I: Requirements Verification Matrix

No	Requirement	Reference Paragraph	Verification Method			
			D	T	A	I
1	SPD/TVSS general requirements are in accordance with UL1449 Second Edition.	3.1.4.1	X			X
2	Encapsulation requirement	3.1.4.5	X			X
3	SPD/TVSS components are accessible for maintenance and replacement.	3.1.4.6				X
4	Clear manufacturer's installation instructions with each unit.	3.1.4.10				X
5	Circuit diagram provided with each unit	1.2				
6	SPD/TVSS packaging/enclosure	3.1.4.2-3.1.4.4				X
7	SPD/TVSS operating lifetime requirement	3.2.10		X		
8	MCOV shall not be less than 10% above nominal system voltage	3.2.2		X		
9	The DC leakage current is less than 1mA for voltages at or below $1.414 \times \text{MCOV VDC}$.	3.2.3		X		
10	Clamp (discharge) voltage shall not change by more than 10 percent over the operating life.	3.2.4		X		
11	Overshoot voltage shall not exceed twice the SPD/TVSS clamp voltage for more than 10 nanoseconds.	3.3.5		X		
12	Self-restoring capability of SPD/TVSS after surge dissipation	3.2.6		X		
13	In-line inductors other than that normally caused by routing conductors, are not permitted..	3.2.8				X
14	Any fuses that are part of SPD/TVSS installation shall be able to pass all surge currents specified in Table I without opening.	3.2.9		X		

15	SPD/TVSS overcurrent device shall not increase the clamp voltage of the SPD/TVSS by greater than 5%	3.1.6.1.1		X		
16	SPD/TVSS overcurrent devices shall either be field re-settable or replaceable.	3.1.6.1.3				X
17	Not more than 10% change in the 8/20 μ s clamping voltage at 3kA during testing. The pre-life test value shall be taken as the 100% value.	3.2.11		X		
18	Not more than 10% change in the RMS voltage required to drive 1mA RMS through the SPD/TVSS when the pre-life/service test and the post-life or in-service test results are compared.	3.2.12		X		
19	Not more than 10% change in the DC voltage required to drive 1mA DC through the device when the pre life/service test and the post life or in-service test results are compared.	3.2.13		X		
20	The slope resistance values shall conform to Table II.	3.2.14		X	X	
21	Electrical isolation between unconnected SPD/TVSS terminals	3.1.4.9		X		
22	Indicator lamps provided for each phase on the SPD/TVSS enclosure cover visually indicate normal condition.	3.2.16	X			
23	Indicator lamps service life requirement	3.7			X	

PART I - SECTION D
PACKAGING AND MARKING

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

D1.0 Preservation, Packaging and Packing

Supplies to be delivered shall be preserved, packaged and packed in accordance with ASTM-D 3951-95, Standard Practice for Commercial Packaging and/or using best commercial practice.

D2.0 Marking

In addition to information provided with shipping instructions, all deliverables shall be marked with the following:

- (a) FAA contract number under which the item is being delivered.
- (b) Contractor's name and address.
- (c) List of contents.
- (d) Deliverable requirements as stated in Contract Section C, if applicable.
- (e) Name and routing symbol of person to who deliverable is being sent.

PART I - SECTION E
INSPECTION AND ACCEPTANCE

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

3.10.4-2 Inspection of Supplies--Fixed-Price (November 1997)

3.10.4-16 Responsibility for Supplies (April 1996)

3.10.4-13 Higher-Level Contract Quality Requirement (July 2006)

(a) The Contractor shall comply with the FAA standard titled 019E, which is hereby incorporated into this contract.

3.10.9-2 First Article Approval--Government Testing (July 2003)

(a) The Contractor shall deliver 6 unit(s) of Lot/Item 2 within 30 calendar days from the date of this contract to the Government at Logistics Support Facility (LSF) Bldg 2, FAA Mike Monroney Aeronautical Center, 6500 S. MacArthur Blvd, Oklahoma City, OK 73169 for first article tests. The shipping documentation shall contain this contract number and the Lot/Item identification. The characteristics that the first article must meet and the testing requirements are specified elsewhere in this contract.

(b) Within 90 calendar days after the Government receives the first article, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in paragraph (b) of this clause. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, the Contractor--

(1) May deliver the approved first article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing; and

(f) If the Government does not act within the time specified in paragraphs (b) or (c) of this clause, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.

(h) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for

(1) payments, or

(2) termination settlements if the contract is terminated for the convenience of the Government.

(i) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.

PART I - SECTION F
DELIVERIES OR PERFORMANCE

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:
<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

3.10.1-9 Stop-Work Order (October 1996)
3.10.1-11 Government Delay of Work (April 1996)
3.2.2.8-3 Delivery of Excess Quantities (April 1996)
3.10.1-24 Notice of Delay (November 1997)

3.11-34 F.O.B. Destination (April 1999)

3.2.2.8-2 Variation in Quantity (April 1996)

(a) A variation in the quantity of any contract item will not be accepted unless the variation has been caused by conditions of loading, shipping, or packing or allowances in manufacturing processes, and then only to the extent, if any, specified in paragraph (b) below.

(b) The permissible variation shall be limited to: 0 % increase and 0 % decrease.

F1.0 Place/Time of Delivery

Services shall be performed/delivered as required in Section B and Section C (SOW).

F2.0 Period of Performance

This contract consists of a base period, plus four (4) one-year options, as stated below:

CLIN 00xx	Base Period:	1 October 2008 through 30 September 2009
CLIN 10xx	Option 1:	1 October 2009 through 30 September 2010
CLIN 20xx	Option 2:	1 October 2010 through 30 September 2011
CLIN 30xx	Option 3:	1 October 2011 through 30 September 2012
CLIN 40xx	Option 4:	1 October 2012 through 30 September 2013

PART I - SECTION G
CONTRACT ADMINISTRATION DATA

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

3.10.1-22 Contracting Officer's Technical Representative (January 2008)

G1.0 Contract Administration (FAA)

The Points of Contact for this Contract are as follows:

Federal Aviation Administration
 Ken Carter, AJA-47
 800 Independence Avenue, SW
 Washington, DC 20591
 Telephone: (202) 267-3012
 E-Mail: Kenneth.M.Carter@faa.gov

Contracting Officer's Technical Representative

Federal Aviation Administration
 Chauncey Woodland, AJW-222
 800 Independence Avenue, SW
 Washington, DC 20591
 Telephone: (202) 267-3653
 E-Mail: Chauncey.Woodland@faa.gov

G2.0 FAA Contracting Officer's (CO) Authority

The FAA Contracting Officers (CO) assigned to this contract have responsibility for ensuring the performance of all necessary actions for effective contracting; ensuring compliance with the terms and conditions of the contract and safeguarding the interests of the United States in its contractual relationships. In this regard, the CO is the only individual who has the authority to enter into, administer, or terminate this contract. In addition, the CO is the only person authorized to approve changes to any of the requirements under this contract, and notwithstanding any provisions contained elsewhere in this contract, this authority remains solely with the CO.

It is the responsibility of the Contractor to contact the CO immediately if there is even the appearance of any technical direction that is or may be outside the scope of the contract. Work not ordered by the CO and/or work outside the scope of the contract shall not be reimbursed by the Government. The Contractor shall immediately notify the CO for clarification when a question arises regarding the authority of any person to act for the CO under the contract.

G3.0 Contracting Officer's Technical Representative (July 1996) (AMS 3.10.1-22)

(a) The Contracting Officer may designate other Government personnel (known as the Contracting Officer's Technical Representative) to act as his or her authorized representative for contract administration functions which do not involve changes to the scope, price, schedule, or terms and conditions of the contract. The designation will be in writing, signed by the Contracting Officer, and will set forth the authorities and limitations of the representative(s) under the contract. Such designation will not contain authority to sign contractual documents, order contract changes, modify contract terms, or create any commitment or liability on the part of the Government different from that set forth in the contract.

(b) The Contractor shall immediately contact the Contracting Officer if there is any question regarding the authority of an individual to act on behalf of the Contracting Officer under this contract.

G4.0 Contractor Contacts for Post Award Administration

(a) Contracting Officer: The name, address, e-mail address and telephone number of the Offeror's Contracting officer are as follows:

(b) Contract Administrator: The name, address, e-mail address and telephone number of the Offeror's Contract Administrator, if different than G4.0(a):

G5.0 Correspondence Procedures

To promote timely and effective contract administration, correspondence, except for invoices and deliverable items, submitted under this contract shall be subject to the following procedures:

(a) Technical Correspondence of a Routine Nature: This correspondence shall be addressed to the Contracting Officer's Technical Representative, with an information copy to the Contracting Officer.

(b) Other Correspondence: Technical correspondence where patent or technical data issues are involved, and correspondence which proposes or otherwise involves waivers, deviations, or modifications to the contract requirements, terms or conditions shall be addressed to the FAA Contracting Officer, with an information copy to the COTR. All correspondence shall contain a subject line commencing with the contract number.

G6.0 INVOICING PROCEDURES - GENERAL (JAN 2002)

(a) In addition to the requirements set forth at AMS Clause 3.3.1-17, Prompt Payment, for the submission of a proper invoice, the contractor shall submit a separate invoice for (1) each month of performance of services, or (2) those items of supplies furnished, as follows:

(1) The original to:

FAA, Contracting Officer (AJA-47)
Attn: Ken Carter
800 Independence Ave., SW
Washington DC 20591

(2) Two copies to:

FAA Accounts Payable Branch, AMZ-110
P.O. Box 25710
Oklahoma City, OK 73125

(3) One copy to:

FAA, Program Manager (AJW-222)
Attn: Chauncey Woodland
800 Independence Ave., SW
Washington DC 20591

(b) Each invoice shall highlight the following information:

- (1) Contract number
- (2) Noun description of services and/or supplies, including applicable line item number(s) and quantity(s) that were provided.
- (3) Extended totals for invoiced quantities.

(c) All contractors invoicing services to the FAA in labor hours shall maintain on file, and submit when required for verification or audit, certified time logs showing a daily start and ending work times, the daily total of productive hours charged to the contract, a daily entry for any non-productive work-hours and cumulative totals for each pay period.

(d) *Payments.* (1) *Services accepted.* Payment shall be made for services accepted by the Government that have been delivered to the delivery destination(s) set forth in this contract. The Government will pay the Contractor as follows upon the submission of commercial invoices approved by the Contracting Officer:

(i) Invoices may be submitted once each month (or at more frequent intervals, if approved by the Contracting Officer) to the Contracting Officer or the authorized representative.

G7.0 Accounting & Appropriation Data

The Accounting and Appropriation Data corresponding to this contract will be set forth at contract award.

G8.0 WARRANTY - PRODUCTS (JAN 1997)

The contractor warrants that by its standard commercial warranty the services, or products ("products" includes equipment, fabrication processes, raw or finished materials, and intermediate assemblies) conform to contract requirements. The contractor also warrants that products are free of design defects and defects in materials or workmanship.

PART I - SECTION H
SPECIAL CONTRACT REQUIREMENTS

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

H.1 Reserved.

PART II - SECTION I CONTRACT CLAUSES

3.1-1 **Clauses and Provisions Incorporated by Reference (December 2005)**

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

3.1.7-5	Disclosure of Conflicts of Interest (May 2001)
3.2.2.3-8	Audit and Records (July 2004)
3.2.2.3-37	Notification of Ownership Changes (July 2004)
3.2.2.3-33	Order of Precedence (July 2004)
3.2.2.7-6	Protecting the Government's Interest when Subcontracting with Contractors
Debarred, Suspended, or Proposed for Debarment (April 1996)	
3.2.2.3-75	Requests for Contract Information (July 2004)
3.2.4-4	Fixed-Price Contracts with Economic Price Adjustment-Labor and Material (April 1996)
3.2.4-27	Limitation of Price and Contractor Obligations (April 1996)
3.2.4-28	Cancellation of Items (April 1996)
3.2.4-34	Option to Extend Services (April 1996)
3.2.2.7-8	Disclosure of Team Arrangements (April 2008)
3.2.5-1	Officials Not to Benefit (April 1996)
3.2.5-3	Gratuities or Gifts (January 1999)
3.2.5-4	Contingent Fees (October 1996)
3.2.5-5	Anti-Kickback Procedures (October 1996)
3.2.5-7	Disclosure Regarding Payments to Influence Certain Federal Transactions (June 1999)
3.2.5-8	Whistleblower Protection for Contractor Employees (April 1996)
3.3.1-1	Payments (April 1996)
3.3.1-6	Discounts for Prompt Payment (April 1996)
3.3.1-7	Limitation on Withholding of Payments (April 1996)
3.3.1-8	Extras (April 1996)
3.3.1-9	Interest (January 2008)
3.3.1-15	Assignment of Claims (April 1996)
3.3.1-17	Prompt Payment (January 2008)
3.3.1-34	Payment by Electronic Funds Transfer/Central Contractor Registration (October 2005)
3.3.2-1	FAA Cost Principles (October 1996)
3.2.4-8	Federal, State, and Local Taxes--Fixed Price Contract (April 1996)
3.5-3	Patent Indemnity (April 1996)
3.6.1-1	Notice of Total Small Business Set-Aside (July 2006)
3.6.1-7	Limitation on Subcontracting (August 1997)
3.6.2-4	Walsh-Healey Public Contracts Act (April 1996)
3.6.2-9	Equal Opportunity (August 1998)
3.6.2-12	Affirmative Action for Special Disabled and Vietnam Era Veterans (April 2007)
3.6.2-13	Affirmative Action for Workers With Disabilities (April 2000)
3.6.2-14	Employment Reports on Special Disabled Veterans and Veterans of Vietnam Era (April 2007)
3.6.2-37	Notification of Employees' Rights Concerning Payment of Union Dues or Fees (April 2007)
3.6.2-38	Certification of Knowledge Regarding Child Labor End Products (July 2007)
3.6.2-39	Trafficking in Persons (January 2008)

3.6.3-1	Clean Air and Water Certification (April 2000)
3.6.3-2	Clean Air and Clean Water (April 1996)
3.6.3-11	Toxic Chemical Release Reporting (April 2008)
3.6.3-16	Drug Free Workplace (January 2004)
3.6.3-17	Efficiency in Energy-Using Products (April 2008)
3.6.4-2	Buy American Act--Supplies (July 1996)
3.6.4-8	Buy American Act--NAFTA Implementation Act--Balance of Payment Program (July 1996)
3.6.4-10	Restrictions on Certain Foreign Purchases (April 1996)
3.9.1-1	Contract Disputes (November 2002)
3.9.1-2	Protest After Award (August 1997)
3.10.1-7	Bankruptcy (April 1996)
3.10.1-12	Changes--Fixed-Price (April 1996)
3.10.1-13	Changes--Cost-Reimbursement (April 1996)
3.10.1-25	Novation and Change-of-Name Agreements (October 2007)
3.10.2-1	Subcontracts (Fixed-Price Contracts) (April 1996)
3.10.6-1	Termination for Convenience of the Government (Fixed Price) (October 1996)
3.10.6-4	Default (Fixed-Price Supply and Service) (October 1996)
3.13-5	Seat Belt Use by Contractor Employees (January 1999)
3.14-3	Foreign Nationals as Contractor Employees (April 2008)
3.1.7-6	Disclosure of Certain Employee Relationships (October 2006)

(a) The policy of the FAA is to avoid doing business with contractors, subcontractors, and consultants who have a conflict of interest or an appearance of a conflict of interest. The purpose of this policy is to maintain the highest level of integrity within its workforce and to ensure that the award of procurement contracts is based upon fairness and merit.

(b) The contractor must provide to the Contracting Officer the following information with its proposal and must provide an information update within 30 days of the award of a contract, any subcontract, or any consultant agreement, or within 30 days of the retention of a Subject Individual or former FAA employee subject to this clause:

(1) The names of all Subject Individuals who:

- (i) participated in preparation of proposals for award; or
- (ii) are planned to be used during performance; or
- (iii) are used during performance; and

(2) The names of all former FAA employees, retained by the contractor who were employed by FAA during the two year period immediately prior to the date of:

- (i) the award; or
- (ii) their retention by the contractor; and

(3) The date on which the initial expression of interest in a future financial arrangement was discussed with the contractor by any former FAA employee whose name is required to be provided by the contractor pursuant to subparagraph (2); and

(4) The location where any Subject Individual or former FAA employee whose name is required to be provided by the contractor pursuant to subparagraphs (1) and (2), are expected to be assigned.

(c) "Subject Individual" means a current FAA employee's father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, spouse of an in-law, or a member of his/her household.

(d) The contractor must incorporate this clause into all subcontracts or consultant agreements awarded under this contract and must further require that each such subcontractor or consultant incorporate this clause into all subcontracts or consultant agreements at any tier awarded under this contract unless the Contracting Officer determines otherwise.

(e) The information as it is submitted must be certified as being true and correct. If there is no such information, the certification must so state.

(f) Remedies for nondisclosure: The following are possible remedies available to the FAA should a contractor misrepresent or refuse to disclose or misrepresent any information required by this clause:

- (1) Termination of the contract.
- (2) Exclusion from subsequent FAA contracts.
- (3) Other remedial action as may be permitted or provided by law or regulation or policy or by the terms of the contract.

(g) Annual Certification. The contractor must provide annually, based on the anniversary date of contract award, the following certification in writing to the Contracting Officer:

ANNUAL CERTIFICATION OF DISCLOSURE OF CERTAIN EMPLOYEE RELATIONSHIPS

The contractor represents and certifies that to the best of its knowledge and belief that during the prior 12 month period:

☐ A former FAA employee(s) or Subject Individual(s) has been retained to work under the contract or subcontract or consultant agreement and complete disclosure has been made in accordance with subparagraph (b) of AMS Clause 3.1.7-6.

☐ No former FAA employee(s) or Subject Individual(s) has been retained to work under the contract or subcontract or consultant agreement, and disclosure required by AMS Clause 3.1.7-6 is not applicable.

Authorized Representative

Company Name

Date

3.14-2 Contractor Personnel Suitability Requirements (April 2008)

(a) This clause applies to the extent that this contract requires contractor employees, subcontractors, or consultants to have unescorted access to FAA:

- (1) Facilities;
- (2) Sensitive information; and/or;
- (3) Resources regardless of the location where such access occurs, and none of the exceptions of FAA Order 1600.72A, Contractor and Industrial Security Program, Chapter 5, paragraphs 4, 6, 7 and 8 pertains.

Definitions of applicable terminology are contained in the corresponding guidance and FAA Order 1600.72A, appendix A.

(b) Consistent with FAA Order 1600.72A, the FAA Servicing Security Element (SSE) has approved designated risk levels for the positions under the contract. Those designated risk levels are:

(1) **None.** Contractor must be "escorted" at all times.

3.2.2.7-1 Qualification Requirements (April 1996)

(a) Definition: 'Qualification requirement,' as used in this clause, means a Government requirement for testing or other quality assurance demonstration that must be completed.

(b) One or more qualification requirements apply to the supplies or services covered by this contract. For those supplies or services requiring qualification, whether the covered product or service is an end item under this contract or simply a component of an end item, the product, manufacturer, or source must demonstrate that it meets the standards prescribed for qualification.

(c) Reserved.

(d) Even though a product or service subject to a qualification requirement is not itself an end item under this contract, the product, manufacturer, or source must nevertheless be qualified at the time of award of this contract. This is necessary whether the Contractor or a subcontractor will ultimately provide the product or service in question. If, after award, the Contracting Officer discovers that an applicable qualification requirement was not in fact met at the time of award, the Contracting Officer may either terminate this contract for default or allow performance to continue if adequate consideration is offered and the action is determined to be otherwise in the Government's best interests.

(e) If an offeror, manufacturer, source, product, or service has met the qualification requirement but is not yet on a qualified products list or qualified vendors list, the offeror shall submit evidence of qualification prior to award of this contract. Unless determined to be in the Government's interest, award of this contract shall not be delayed to permit an offeror to submit evidence of qualification.

(f) Any change in location or ownership of the plant where a previously qualified product or service was manufactured or performed requires reevaluation of the qualification. Similarly, any change in location or ownership of a previously qualified manufacturer or source requires reevaluation of the qualification. The reevaluation must be accomplished before the date of award.

3.2.4-16 Ordering (October 1996)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from 1 Oct 2008 through 30 Sept 2009, or from date of award through 365 calendar days.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

3.2.4-17 Order Limitations (October 1996)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than 100 ea, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor-

(1) Any order for a single item in excess of 500 ea ;

(2) Any order for a combination of items in excess of 500 ea ; or

(3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract, the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 10 calendar days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

3.2.4-20 Indefinite Quantity (July 1996)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the "Ordering" clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the maximum. The Government shall order at least the quantity of supplies or services designated in the Schedule as the minimum.

(c) Except for any limitations on quantities in the "Order Limitations" clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall

be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after 31 December 2013.

3.2.4-35 Option to Extend the Term of the Contract (April 1996)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 calendar days provided, that the Government shall give the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option provision.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 60 (months), or 5 (years).

3.3.1-33 Central Contractor Registration (January 2008)

(a) Definitions. As used in this clause

"Central Contractor Registration (CCR) database" means the primary Government repository for Contractor information required for the conduct of business with the Government.

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts for the same parent concern.

"Registered in the CCR database" means that the Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in Representations, Certifications and Other Statements of Offerors Section of the solicitation, the DUNS or DUNS +4 numbers that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is

registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://fedgov.dnb.com/webform>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and ZIP Code.

(iv) Company Mailing Address, City, State and ZIP Code (if different from physical street address).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer may proceed to award to the next otherwise successful registered offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)(1)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in AMS Procurement Guidance T3.10.1.A-8, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to:

(A) change the name in the CCR database;

(B) comply with the requirements of T3.10.1.A-8; and

(C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide the Contracting Officer with the notification, sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims. Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov/> or by calling 1-888-227-2423, or 269-961-5757.

3.3.1-34 Payment by Electronic Funds Transfer/Central Contractor Registration (October 2005)

(a) Method of payment.

(1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either—

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR Part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Liability for uncompleted or erroneous transfers.

(1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for—

- (i) Making a correct payment;
- (ii) Paying any prompt payment penalty due; and
- (iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and—

- (i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or
- (ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register separately in the CCR database and shall be paid by EFT in accordance with the terms of this clause. Notwithstanding any other requirement of this contract, payment to an ultimate recipient other than the Contractor, or a financial institution properly recognized under an assignment of claims, is not permitted. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and

delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

PART III - SECTION J
LIST OF ATTACHMENTS

J.1	Surge Protection Device/Transient Voltage Surge Suppressor (SPD/TVSS) Test Procedures	16 Pages
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PART IV - SECTION K
REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:
<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

- 3.2.5-2 Independent Price Determination** (October 1996)
3.6.2-5 Certification of Non-segregated Facilities (April 1996)
3.6.3-1 Clean Air and Water Certification (April 2000)
3.13-4 Contractor Identification Number/Data Universal Numbering System (DUNS)
Number (April 2006)

3.2.2.3-10 Type of Business Organization (July 2004)

By checking the applicable box, the offeror (you) represents that--

(a) You operate as ☐ a corporation incorporated under the laws of the State of _____,
☐ an individual, ☐ a partnership, ☐ a nonprofit organization, ☐ a joint venture or ☐ other
_____[specify what type of organization].

(b) If you are a foreign entity, you operate as ☐ an individual, ☐ a partnership, ☐ a nonprofit organization,
☐ a joint venture, or ☐ a corporation, registered for business in

(country)

3.2.2.3-2 Minimum Offer Acceptance Period (July 2004)

(a) 'Acceptance period,' as used in this provision, means the number of calendar days the FAA (we, us) has to award a contract from the date the SIR specifies for receiving offers.

(b) This provision supersedes any language about the acceptance period appearing elsewhere in this SIR.

(c) We require a minimum acceptance period of 120 calendar days.

(d) The offeror (you) may specify a longer acceptance period than the period shown in paragraph (c). To specify a longer period, fill in the blank: The offeror allows the following acceptance period: _____ calendar days.

(e) We may reject an offer allowing less than the FAA's minimum acceptance period.

(f) You agree to fulfill your offer completely if the FAA accepts your offer in writing within:

- (1) The acceptance period stated in paragraph (c) of this provision; or
- (2) Any longer acceptance period stated in paragraph (d) of this provision.

3.2.2.3-15 Authorized Negotiators (July 2004)

The offeror states that the following persons are authorized to negotiate on your behalf with the FAA in connection with this offer:

Name: _____

Title: _____

Phone number: _____

3.2.2.3-23 Place of Performance (July 2004)

(a) The offeror (you), in fulfilling any contract resulting from this SIR, ☐ intends, ☐ does not intend (check applicable block) to use one or more plants or facilities located at a different address from your address as stated in this offer.

(b) If you check 'intends' in paragraph (a) above, insert the following information:

Place of Performance Street: _____

City: _____

State: _____

Zip Code: _____

Name of owner and operator, if other than the owner _____

3.2.2.3-35 Annual Representations and Certifications (July 2004)

The offeror certifies that annual representations and certifications (check the appropriate block):

☐ (a) Dated _____ (insert date of signature on offer) which are incorporated by reference, have been submitted to the contracting office issuing this SIR and that the information is current, accurate, and complete as of the date of this offer, except as follows (insert changes that affect only this SIR; if 'none,' say so):

☐ (b) Are enclosed.

3.2.2.3-70 Taxpayer Identification (July 2004)

(a) Definitions.

(1) "Common parent," as used in this clause, means a corporate entity that owns or controls an affiliated group of corporations that files an offeror's (you, your) Federal income tax returns on a consolidated basis, and of which you are a member.

(2) "Corporate status," as used in this clause, means a designation as to whether you are a corporate entity, an unincorporated entity (for example, sole proprietorship or partnership), or a corporation providing medical and health care services.

(3) "Taxpayer Identification Number (TIN)," as used in this clause, means the number the Internal Revenue Service (IRS) requires you use in reporting income tax and other returns.

(b) All offerors must submit the information required in paragraphs (c) through (e) of this provision to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by IRS. The FAA will use this information to collect and report on any delinquent amounts arising out of your relation with the Federal Government, under Public Law 104 -134, the Debt Collection Improvement Act of 1996, Section 31001(l)(3). If the resulting contract is subject to the reporting requirements and you refuse or fail to provide the information, the Contracting Officer (CO) may reduce your payments 31 percent under the contract.

(c) Taxpayer Identification Number (TIN).

☐ TIN: _____

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not leave income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of a Federal, state, or local government;

☐ Other--State basis. _____

(d) Corporate Status.

☐ Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

☐ Other corporate entity

☐ Not a corporate entity

☐ Sole proprietorship

☐ Partnership

☐ Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

☐ A common parent does not own or control the offeror as defined in paragraph (a).

☐ Name and TIN of common parent:

Name _____

TIN _____

3.2.2.3-76 Representation- Release of Contract Information (July 2004)

(a) Any contract resulting from this SIR may be subject to release under the Freedom of Information Act (FOIA), 5 U.S.C. Section 552.

(b) The offeror's (you, your) position regarding the possible release of information you provide in response to this SIR is as follows:

(c) REPRESENTATION CONCERNING RELEASE OF CONTRACT INFORMATION--

The offeror (you) represents that--(1) ☐ You have made a complete review of your offer(s) in response to this SIR and no exemption from mandatory release under FOIA exists, and, (2) ☐ You have no objection to the release of any contract you may be awarded in whole or in part resulting from this SIR.

OR

The offeror (you) represents that ☐ your offer(s) in response to this SIR contains information that is exempt from mandatory release under FOIA. Accordingly, you represent that--(1) ☐ You have identified any sensitive documents you submitted in response to this SIR by placing restrictive markings on them. This may include trade secrets, proprietary information, or commercial or financial information that is privileged or confidential, and (2) ☐ As the party that provided the information, you have provided the Contracting Officer (by separate letter concurrent with this offer) detailed information listing the page(s) to be withheld complete with any and all legal justifications which would permit the FAA to invoke a FOIA exemption.

3.2.2.7-7 Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters (April 1996)

(a) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ☐ are not ☐ presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ☐ have not ☐ within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(C) Are ☐ are not ☐ presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐ has not ☐ within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

'Principals,' for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions). THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this SIR. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this SIR for default.

3.6.2-3 Walsh-Healey Public Contracts Act Representation (January 1998)

The offeror represents as a part of this offer that the offeror:

is ☐ or is not ☐ a regular dealer in, or

is ☐ or is not ☐ a manufacturer of, the supplies offered.

3.6.2-9 Equal Opportunity (August 1998)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11)

below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to,

(i) employment,

(ii) upgrading,

(iii) demotion,

(iv) transfer,

(v) recruitment or recruitment advertising,

(vi) layoff or termination,

(vii) rates of pay or other forms of compensation, and

(viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices that explain this clause.

(4) The Contractor shall, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the FAA all information required by Executive Order 11246, as

amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.

(8) The Contractor shall permit access to its books, records, and accounts by the FAA or the Office of Federal Contract Compliance Programs (OFCCP) for the purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, the contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the FAA may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

3.6.2-8 Affirmative Action Compliance (April 1996)

The offeror represents that (a) it [] has developed and has on file, [] has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it [] has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

3.6.2-38 Certification of Knowledge Regarding Child Labor End Products (July 2007)

(a) Definition.

"Forced or indentured child labor," as used in this clause, means all work or service:

- (i) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer itself voluntarily; or
- (ii) Performed by any person under the age of 18 pursuant to a contract, the enforcement of which can be accomplished by process or penalties.

(b) Listed End Products. The following end product(s) being acquired under this solicitation is (are) included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, identified by their country of origin. There is a reasonable basis that the listed end products from the listed countries of origin may have been mined, produced, or manufactured by forced or indentured child labor.

Listed End Product Listed Countries of Origin

(c) Certification. The FAA will not make award to an offeror unless the offeror, by checking the appropriate block, certifies to either paragraph (c)(1) or (c)(2) of this provision.

☐ (1) The offeror will not supply any end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in a corresponding country as listed for that end product.

☐ (2) The offeror may supply an end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product, and the offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture that end product.

3.6.3-10 Certification of Toxic Chemical Release Reporting (August 1998)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: [Offeror check each block that is applicable.]

☐ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section

313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

___(iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 or;

___(v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

3.6.4-15 Buy American Act Certificate (July 1996)

(a) The offeror certifies that each end product, except as listed below, is a domestic end product (as defined in the clause "Buy American Act-Supplies,") and components of unknown origin are considered to have been mined, produced, or manufactured outside the United States.

Excluded End Product Country of Origin

[list as necessary]

(b) The offeror agrees to furnish any additional information as the Contracting Officer may request to verify the above information and to evaluate the offer. Offerors may obtain from the Contracting Officer lists of articles, materials, and supplies excepted from the Buy American Act.

3.6.4-17 Buy American Act--NAFTA Implementation Act--Balance of Payments Certificate (July 1996)

(a) The offeror certifies that each end product or service, except as listed below, is a domestic end product or service (as defined in the clause "Buy American Act-NAFTA Implementation Act-Balance of Payments Program") and components of unknown origin are considered to have been mined, produced, or manufactured outside the United States.

Excluded End Product Country of Origin

[list as necessary]

(b) Under certain circumstances, offers of North American Free Trade Agreement (NAFTA) country end products (as defined in the clause "Buy American Act-North American Free Trade Agreement Act Implementation Act-Balance of Payments") will be given the same preference as domestic end products. To obtain this preference, offerors must identify below those end products that are NAFTA country end

products. Products that are not identified and certified below will not be deemed NAFTA country end products

Excluded End NAFTA Country of Origin
Product

[list as necessary]

(c) The offeror agrees to furnish any additional information as the Contracting Officer may request to verify the above information and to evaluate the offer. Offerors may obtain from the Contracting Officer lists of articles, materials, and supplies except from the Buy American Act.

PART IV - SECTION L**INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS****3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)**

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

- 3.2.2.3-1 False Statements in Offers (July 2004)**
- 3.2.2.3-6 Submittals in the English Language (July 2004)**
- 3.2.2.3-7 Submittals in U.S. Currency (July 2004)**
- 3.2.2.3-9 Notice of Possible Standardization (July 2004)**
- 3.2.2.3-11 Unnecessarily Elaborate Submittals (July 2004)**
- 3.2.2.3-12 Amendments to Screening Information Requests (July 2004)**
- 3.2.2.3-13 Submission of Information/Documentation/Offer (July 2004)**
- 3.2.2.3-14 Late Submissions, Modifications, and Withdrawals of Submittals (July 2004)**
- 3.2.2.3-16 Restricting, Disclosing and Using Data (July 2004)**
- 3.2.2.3-17 Preparing Offers (July 2004)**
- 3.2.2.3-18 Prospective Offeror's Requests for Explanations (July 2004)**
- 3.2.2.3-19 Contract Award (July 2004)**
- 3.2.2.3-20 Electronic Offers (July 2004)**
- 3.9.1-3 Protest (November 2002)**
- 3.13-4 Contractor Identification Number--Data Universal Numbering System (DUNS) Number (April 2006)**

**L1.0 INSTRUCTIONS TO OFFERORS—COMMERCIAL ITEMS
(Nov 2007)**

(a) North American Industry Classification System (NAICS) code and small business size standard. The NAICS code and small business size standard for this acquisition is 335999, All Other Miscellaneous Electrical Equipment and Component Manufacturing with a small business size standards in number of employees of 500.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. As a minimum, offers must show—

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;
- (3) The name, address, and telephone number of the offeror;
- (4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;
- (5) Terms of any express warranty;
- (6) Price and any discount terms;
- (7) "Remit to" address, if different than mailing address;
- (8) Acknowledgment of Solicitation Amendments;

(9) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information).

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 120 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

3.1.9-1 Electronic Commerce and Signature (July 2007) (July 2007)

(a) The Electronic Signatures in Global and National Commerce Act (E-SIGN) establishes a legal equivalence between

- i. Contracts written on paper and contracts in electronic form;
- ii. Pen-and-ink signatures and electronic signatures; and
- iii. Other legally-required written records and the same information in electronic form.

(b) With the submission of an offer, the offeror acknowledges and accepts the utilization of electronic commerce as part of the requirements of this solicitation and the resultant contract.

(c) With the submission of an offer, the offeror understands the means of electronic commerce authorized under this contract are electronic mail and facsimile.

(d) With the submission of an offer, the contractor understands that the portions of the contract authorized for the usage of electronic commerce are official correspondence, contract modifications, or other designated contract actions.

L.2 INFORMATION AND CONSIDERATIONS AFFECTING OFFEROR PROPOSAL SUBMISSIONS

(a) This acquisition will involve the use of streamlined acquisition procedures employing best practices for competitive negotiated procurements as authorized by the Federal Aviation Administration Acquisition Management System (AMS) of 1997.

(b) The procurement process will involve the evaluation of technical proposals for the Base Year and (4) one Year Options to include CLINS 0001 through 0007 and each option year thereafter. Evaluations involved will permit the FAA to select an offer that is the most highly rated submission based on overall best value to the FAA. During the evaluation process the FAA may refer to information sent by the offerors during downselection.

(c) Specific attention is invited to AMS paragraph 3.2.2.3.1.2.2, Communications with Offerors. The FAA may communicate with one or more offerors at any time during the SIR process. Communications with one offeror do not necessitate communications with other offerors, since communications will be offeror-specific. Information determined to have common application and not considered prejudicial to offerors will be communicated to all offerors.

(d) This document constitutes a formal SIR for which an award may be made without further discussions/negotiations. Offerors are to consider all terms and conditions contained in the formal SIR in preparation of the proposals set forth herein.

L.3 INSTRUCTIONS FOR PREPARATION AND SUBMISSION OF PROPOSALS

(a) Each offeror will submit information identified in the volumes as set forth in Table 1 below. The data submitted should be complete, concise and relevant to the requirements of the SIR/RFO and are required to be submitted in the format outlined below.

(b) The titles and contents of the volumes should be as defined in Table 1 of this document along with the required number of copies. Each volume should be submitted in an individual binder/folder.

Table 1. Proposal Organization

VOLUME	TITLE	COPIES
I	Technical Compliance and Capability Factors with FAA Standard 019E	3
II	Past Performance	3
*III	Cost/Price Proposal	3

*No reference shall be made to prices/costs in Volumes I and II.

(c) Common items for each volume are:

(1) Format.

- a. Volume III. Government issued format, Sections A through K, of the SIR, with appropriate information inserted by the offeror.
- b. Volumes I and II. This is offerors format with the following exceptions.
 1. Page size shall be 8.5x11 inches, except the Engineering Drawing Set shall be 11x17 inches.
 2. The offeror must mark "Source Selection Sensitive" on those sections or pages/sheets they deem competitive sensitive, and/or, trade secrets.
 3. A footer identifying the volume number, Section number, page number, and total number of pages per section shall be put on the bottom of each page. This information is required on the engineering drawings and written material.

Separate responses must be made to each of the following three factors.

Factor 1: Technical Compliance and Capability Factors with FAA Standard 019E

Purpose: To evaluate the vendor's product compliance and capability as it would relate the application in FAA power systems.

Vendor's must:

- a. Demonstrate the capability and ability to support the specification as it pertains to the various TVSS Surge Protectors Devices (SPDs). The vendor must demonstrate the ability to support the systems in need of a SPD per the specifications and the testing requirements mentioned. (See Attachment J.1
- b. Demonstrate a quality SPD product in accordance with FAA testing requirements. The FAA will be looking for responses from industry with respect to the requirements of the FAA's SPD/TVSS mentioned in both the specifications and the testing compliance standards mentioned in the solicitation

Factor 2: Past Performance

Vendor must demonstrate the capability to provide a product in accordance with FAA Standard 019E with regard to the use of their Surge Protective Devices (SPD) with the demands of this requirement in the following areas:

Vendor must provide information on past and present contracts that demonstrate an ability to perform contracts similar in scope and complexity to this requirement. Relevant past performance and experience can be on prior or present government and/or commercial sector contracts requiring the vendor to provide the same or similar type product required under this acquisition.

(A) The vendor shall submit past performance and experience information on up to five (5) recent (within the past five (5) years) contracts considered most relevant in demonstrating your ability to perform the

proposed efforts in the Specifications, Section C. Vendor shall provide quality control information such as, production line rejection rates, field failures, field repairs, etc...for the last five years using these types of Surge Protection Devices (SPDs). The FAA will use data provided by each vendor and data obtained from other sources in the evaluation of past performance and experience.

(B) Vendor must explain what aspects of the contract(s) are deemed relevant to this SIR/RFO Specification element. This may include discussion on efforts by the vendor to improve on their product, cut down on failure rate, optimize manufacturing processes, and efforts by the vendor to resolve problems encountered on existing and past contracts. The problems encountered may be of a simple or complex nature, depending on the program's complexity.

(C) Vendors must include rationale supporting your assertion that the past and present contracts are relevant to the tasks required in this contract. If the vendor has first tier subcontractors, teaming partners, or is in a joint venture it is important they specifically describe their relationship and work performed by each. A relevant contract does not have to contain all elements of a subfactor or all subfactors; vendors may submit information on a contract that relevant to one subfactor or one aspect of a subfactor. Vendors that are newly formed business, without prior contracts or that do not possess relevant corporate past and present performance, should submit up to three (3) performance history sheets on key personnel demonstrating their most recent past and present performance. The FAA will not consider performance on a newly awarded contract without a performance history or on any effort completed more than five (5) years prior to this contract's solicitation date. However, the FAA reserves the right to review contract agreements and performance that are older than five (5) years.

Factor 3: Cost/Price

The Contracting Officer will determine the price analysis techniques to use in the evaluation of offers received in response to the SIR. The pricing techniques will consist of one, or a combination of the following:

Price analysis will be accomplished by -

- a. comparing offers with one another;
- b. comparing prior proposed prices and contract prices with current proposed prices for the same or similar end item;
- c. using yardsticks to highlight significant inconsistencies that warrant additional inquiry;
- d. comparing offers with competitive published price lists, published market prices;
- e. comparing proposed prices with independently developed Government estimates (IGCE); or
- f. comparing proposed prices with prices of the same or similar items obtained through Market Research.

Factors I and II are to be evaluated by each Technical Evaluation Team (TET) member. Factor III will be evaluated by the Contracting Officer, or a team composed by the Contracting Officer for the specific purpose of evaluating cost.

L.4 DISPOSITION OF UNSUCCESSFUL PROPOSALS

Proposals from unsuccessful offerors will not be returned to the offeror. Proposal originals will be retained in the contract file. All other copies will be destroyed by the Contracting Officer.

L.5 PRE-AWARD SURVEY OF PROSPECTIVE CONTRACTOR

(a) If your response to this solicitation is favorably considered, a survey team may contact your facility to determine your ability to perform. Current financial statements and other pertinent data should be available for review at that time. Examples of the areas that may be investigated and evaluated are listed below:

- (1) Financial capability
- (2) Accounting systems

(b) Offerors are advised that accomplishment of this survey is a part of the evaluation process and is not to be construed as an indication that an offeror will receive or is in the best position to receive the resultant award.

L.6 PROPOSAL ACCEPTANCE

- (a) Only one proposal from each offeror shall be considered.
- (b) The FAA reserves the right to consider as acceptable only those proposals submitted in accordance with the requirements set forth in the SIR/RFO which demonstrate an understanding of the complexity and scope of the requirements.
- (c) The FAA further reserves the right to reject, as unacceptable, proposals deleting or altering technical requirements.

3.2.2.3-4 Samples (July 2004)

- (a) 'Samples' are item samples the offeror (you) must provide to show characteristics of your products that cannot be described adequately (for example, balance, ease of use, or pattern).
- (b) You must provide samples required elsewhere in this SIR as part of your offer by the time specified for receiving offers. The FAA may reject offers that do not provide samples on time (see provision 3.2.2.3-14 - "Late Submissions, Modifications, and Withdrawals of Offers").
- (c) The FAA will evaluate samples to determine if they comply with all the characteristics listed in this SIR. The CO may reject offers if they do not provide samples meeting the requirements.
- (d) Unless otherwise specified in the SIR, you must:
 - (1) Provide samples at no expense to the FAA, and
 - (2) Pay for the samples to be returned if you want them back.

3.2.2.3-5 Descriptive Literature (July 2004)

- (a) "Descriptive literature" means information (for example cuts, illustrations, drawings, and brochures) submitted as part of an offer. The FAA (we) may need descriptive literature to evaluate details of the product. These details may be about:
 - (1) Design;
 - (2) Materials;
 - (3) Components;
 - (4) Performance characteristics; or
 - (5) Methods of manufacture, assembly, construction, or operation.
- (b) Descriptive literature includes only information the FAA needs to determine that the offeror (you) will provide technically-acceptable products.

(c) The offeror (you) must mark or highlight the items you are submitting as descriptive literature so we can readily find them in your offer.

(d) The Contracting Officer (CO) may reject offers that fail to submit descriptive literature on time (see the "Late Submissions, Modifications, and Withdrawals of Offers" provision of this SIR) or in which the descriptive literature does not show that the product offered conforms to the SIR requirements.

3.2.4-1 Type of Contract (April 1996)

The FAA contemplates award of an Indefinite Quantity Indefinite Delivery contract resulting from this Screening Information Request.

3.9.1-3 Protest (November 2002)

AS A CONDITION OF SUBMITTING AN OFFER OR RESPONSE TO THIS SIR (OR OTHER SOLICITATION, IF APPROPRIATE), THE OFFEROR OR POTENTIAL OFFEROR AGREES TO BE BOUND BY THE FOLLOWING PROVISIONS RELATING TO PROTESTS:

(a) Protests concerning Federal Aviation Administration Screening Information Requests (SIRs) or awards of contracts shall be resolved through the Federal Aviation Administration (FAA) dispute resolution system at the Office of Dispute Resolution for Acquisition (ODRA) and shall be governed by the procedures set forth in 14 C.F.R. Parts 14 and 17, which are hereby incorporated by reference. Judicial review, where available, will be in accordance with 49 U.S.C. 46110 and shall apply only to final agency decisions. A protestor may seek review of a final FAA decision only after its administrative remedies have been exhausted.

(b) Offerors initially should attempt to resolve any issues concerning potential protests with the Contracting Officer. The Contracting Officer should make reasonable efforts to answer questions promptly and completely, and, where possible, to resolve concerns or controversies. The protest time limitations, however, will not be extended by attempts to resolve a potential protest with the Contracting Officer.

(c) The filing of a protest with the ODRA may be accomplished by mail, overnight delivery, hand delivery, or by facsimile. A protest is considered to be filed on the date it is received by the ODRA.

(d) Only an interested party may file a protest. An interested party is one whose direct economic interest has been or would be affected by the award or failure to award an FAA contract. Proposed subcontractors are not "interested parties" within this definition.

(e) A written protest must be filed with the ODRA within the times set forth below, or the protest shall be dismissed as untimely:

(1) Protests based upon alleged improprieties in a solicitation or a SIR that are apparent prior to bid opening or the time set for receipt of initial proposals shall be filed prior to bid opening or the time set for the receipt of initial proposals.

(2) In procurements where proposals are requested, alleged improprieties that do not exist in the initial solicitation, but which are subsequently incorporated into the solicitation, must be protested not later than the next closing time for receipt of proposals following the incorporation.

(3) For protests other than those related to alleged solicitation improprieties, the protest must be filed on the later of the following two dates:

(i) Not later than seven (7) business days after the date the protester knew or should have known of the grounds for the protest; or

(ii) If the protester has requested a post-award debriefing from the FAA Product Team, not later than five (5) business days after the date on which the Product Team holds that debriefing.

(f) Protests shall be filed at:

(1) Office of Dispute Resolution for Acquisition, AGC-70,
Federal Aviation Administration,
800 Independence Ave., S.W.,
Room 323,
Washington, DC 20591,

Telephone: (202) 267-3290,
Facsimile: (202) 267-3720; or

(2) other address as specified in 14 CFR Part 17.

(g) At the same time as filing the protest with the ODRA, the protester shall serve a copy of the protest on the Contracting Officer and any other official designated in the SIR for receipt of protests by means reasonably calculated to be received by the Contracting Officer on the same day as it is to be received by the ODRA. The protest shall include a signed statement from the protester, certifying to the ODRA the manner of service, date, and time when a copy of the protest was served on the Contracting Officer and other designated official(s).

(h) Additional information and guidance about the ODRA dispute resolution process for protests can be found on the ODRA Website at <http://www.faa.gov>.

PART IV - SECTION M

PART IV - SECTION M - EVALUATION FACTORS FOR AWARD

3.1-1 Clauses and Provisions Incorporated by Reference (December 2005)

This screening information request (SIR) or contract, as applicable, incorporates by reference the provisions or clauses listed below with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available, or offerors and contractors may obtain the full text via Internet at:

<http://conwrite.faa.gov> (on this web page, select "Search and View Clauses").

3.2.4-31 Evaluation of Options (April 1996)

M1.0 Introduction

(a) Offers will be evaluated and contract award made on the basis of "Best Value to the FAA", with technical being significantly more important than cost/price. Subjective judgment on the part of the FAA is implicit in the evaluation process.

(b) Proposals may be eliminated if they are determined to be grossly deficient (i.e., the submittal does not represent a reasonable effort to address itself to all elements of the SIR/RFO or clearly demonstrates that the Vendor does not understand the requirements of the SIR/RFO) and the proposed cost/price are not considered reasonable.

(c) Each proposal will be evaluated on the basis of its written submissions and cost/price information described at Provision L.1 (hereafter referred to as technical and cost/price proposals). Separate technical and cost/price proposals are required as described in Section L.

(d) All offers will be subjected to detailed technical evaluation by a team who will rate proposals in accordance with a pre-established evaluation plan.

(e) Technical proposals will be evaluated, rated, and scored in accordance with pre-established evaluation factors. These factors are listed in Provision M.7 in descending order.

(f) Past Performance proposals will be evaluated to determine vendor's relevant past performance history and experience on prior or present government and/or commercial sector contracts requiring the vendor to provide the same or similar type products.

(f) Cost/Price proposals will be reviewed for mathematical accuracy for the base period and first option period.

(g) The price/cost evaluation team will not have access to technical proposals during the initial detailed evaluation. Likewise, the technical evaluation team will not have access to price/cost proposals during the initial detailed evaluation. After completion of the initial detailed evaluation, the technical and price evaluation teams may have access to the other teams' proposals only as authorized by the Contracting Officer.

(h) The offer that provides the overall best value to the FAA will be selected. The successful offer may not necessarily be the lowest priced offer. Technical and past performance considerations are significantly more important than cost/price. The relative importance of cost will increase as the differences in technical and past performance scores decrease.

(i) Because several proposals are anticipated, uniformity of proposals is essential to assure a fair and accurate assessment of each offer. All proposals must be submitted in accordance with Section L and must conform to all the terms and conditions of the RFO. Failure to conform to all requirements expressed may be cause for rejection without further evaluation or discussion.

(j) Additional information may be requested from the Vendor whose proposal the FAA considers to represent the overall best value. The information may clarify or supplement, but not basically change the proposal as submitted. The FAA reserves the right to award a contract based on initial offers received, without discussions or negotiations. For this reason, each initial offer should be submitted on the most favorable terms from the standpoint of technical and price/cost.

M2.0 Summary of Overall Evaluation and Down-Select Process.

Cost/Price and Technical are evaluated as set forth herein and subsequently ranked respectively. The Integrated Product Team (IPT) will consider tradeoffs between technical, past performance and cost/price factors keeping in mind that technical is significantly more important than past performance and price in determining the overall Best Value to the FAA.

(a) Technical Evaluation. Following a preliminary evaluation to determine if any proposals are grossly deficient the proposals submitted in accordance with contract Section-L, are evaluated against predetermined evaluation factors. Then technical scores are ranked. Technical evaluation ratings are sorted and those qualified vendors considered within a competitive range of 25 percent, or other obvious break in price range, in comparison to the low offer will be selected for advancement to Best Value determination.

(b) Past Performance. The FAA will not consider performance on a newly awarded contract without a performance history or on any effort completed more than five (5) years prior to this contract's solicitation date.

(c) Cost/Price Evaluation. A separate cost/price evaluation by the Contracting Officer or a team assembled by the CO will determine the total cost of doing business with each vendor for the Base contract period and all option contract periods. Results of this cost/price analyses is forwarded to the IPT for inclusion in the Best Value determination.

(e) Best Value Determination. Using the results from the Technical Evaluation Team, the Cost/Price evaluation, and risk assessment, the IPT will make the Best Value determination. The offer that provides the greatest overall value to the FAA will be selected for award. A technical/price tradeoff may be made, and the lowest total evaluated price offer may not provide the greatest overall value to the Government.

(Best Value defined. An approach used to describe the solution that is the most advantageous to the FAA based on the evaluation of price and other factors specified by the FAA. This approach provides the opportunity for trade-offs between price and other specified factors, and does not require that an award be made to either the offeror submitting the highest rated technical solution, or to the offeror submitting the lowest cost/price, although the ultimate award decision may be to either of these offerors.)

M3.0 Technical Compliance and Capability Factors

Vendor must submit documentation demonstrating through similar or like experience their capability to provide a product in accordance with FAA Standard 019E.

The Government will evaluate the contractor's technical proposal in accordance with the performance requirements per the SOW and the TVSS Test Procedures (See Attachment J.1). The offeror must also demonstrate they have the capability to produce the quantity specified per Section B of the SIR.

The offeror shall submit documentation which supports 100% certification that the SPD complies to Table I. Surge Current Lifetime Requirements per the specification mentioned herein. Failure to provide this compliance documentation will be result in the offeror being deemed nonresponsive, and thus, eliminated from further consideration.

M4.0 Past Performance Evaluation Factors

The Government will use past performance evaluation factors in addition to cost or price and other evaluation factors specified in the solicitation.

(A) The vendor shall submit past performance and experience information on up to five (5) recent (within the past five (5) years) contracts considered most relevant in demonstrating your ability to perform the proposed efforts in the Specifications, Section C. The FAA will use data provided by each vendor and data obtained from other sources in the evaluation of past performance and experience.

(B) Vendor must explain what aspects of the contract(s) are deemed relevant to this SIR/RFO Specification element. This may include discussion on efforts by the vendor to improve on their product, cut down on failure rate, optimize manufacturing processes, and efforts by the vendor to resolve problems encountered on existing and past contracts. The problems encountered may be of a simple or complex nature, depending on the program's complexity.

(C) Vendors must include rationale supporting your assertion that the past and present contracts are relevant to the tasks required in this contract. If the vendor has first tier subcontractors, teaming partners, or is in a joint venture it is important they specifically describe their relationship and work performed by each. A relevant contract does not have to contain all elements of a subfactor or all subfactors; vendors may submit information on a contract that relevant to one subfactor or one aspect of a subfactor. Vendors that are newly formed business, without prior contracts or that do not possess relevant corporate past and present performance, should submit up to three (3) performance history sheets on key personnel demonstrating their most recent past and present performance. Reminder: The FAA will not consider performance on a newly awarded contract without a performance history or on any effort completed more than five (5) years prior to this contract's solicitation date. However, the FAA reserves the right to review contract agreements and performance that are older than five (5) years.

M5.0 Cost/Price Analysis

(a) It is anticipated that proposed prices received resulting from this SIR/RFO will be determined fair and reasonable based on adequate price competition. The FAA will conduct a price analysis to determine price reasonableness based on competition. If reasonableness of price cannot be determined through adequate price competition or by other method(s) of price analysis, the FAA will evaluate additional information required as a result of Provision L.4 herein to establish price reasonableness.

(b) Proposals, whether initial or revised submissions, which are unreasonably low or high may be eliminated from further competition on the grounds of the vendor's failure to comprehend contract requirements.

(c) Proposals that reflect unbalanced prices may be eliminated from further consideration on the basis that such pricing may increase performance risk and could result in payment of unreasonably high prices.

M6.0 Options. The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the option(s).

M7.0 Evaluation Process: Each TET member shall evaluate and rate each submittal independently.

1. Preliminary Review: After submittals are received, opened, and recorded, the Contracting Officer (CO) shall schedule and conduct an initial review of all information documents submitted and received. The submittals shall be screened for the purpose of identifying any submittal, which may be grossly deficient. The CO will eliminate any submittal from further consideration, if the submittal is so deficient as to be unacceptable. For elimination at this point, it must be ascertained and substantiated that the submittal is so deficient as to require extensive effort to correct or require an entirely new submission before it could be considered for evaluation.

2. Evaluation, Reporting and Selection: Pursuant to the Request for Information/SIR, the process will involve the evaluation of the contractors proposal pursuant to technical compliance, past performance, and proposed cost/price factors.

M8.0 Technical Evaluation

(a) Selection of a contractor for award will be based on evaluation of technical proposals according to the factors listed below. These factors are listed in descending order of importance.

Factor 1 – Technical compliance and capability factors with FAA Standard 019E

Sub Factor 1 - 100 percent certification that the SPDs comply to Table 1 of the Specifications.

Sub Factor 2 – Capability to support the specifications as it pertains to the various TVSS Surge Protective Devices (SPDs)

Sub Factor 3 --Capability to produce quality SPD products

Within Factor 1, Sub Factors 1 is significantly more important than Sub Factors 2 and 3. Sub Factors 2 and 3 are equal in importance.

Factor 2 – Past performance documenting experience and expertise

Sub Factor 1 - Information on past and present contracts within past 5 years.

Sub Factor 2 - Relevant comparison of past and present contracts to this contract.

Sub Factor 3 - Rationale supporting assertion that past and present contracts are relevant to tasks under this contract.

Within Factor 2, Sub Factors 1 and 2 are equal in importance; and slightly more important than Sub Factor 3.

Factor 1 is more important than Factors 2; and Factors 1 and 2 are more important than Factor 3, Cost/Price, which is rated separately.

(b) Factors will be rated by the evaluation team on the rating scale shown below. Team ratings for each factor will be weighted to establish a score for the technical proposal.

4	=	Excellent
3	=	Good
2	=	Satisfactory
1	=	Marginal
0	=	Unsatisfactory

(c) The numerical ratings relate to the following described assumptions:

Excellent (4.0)

All aspects of the evaluation factor are addressed in a highly competent and logical fashion. Information provided clearly demonstrates that requirements can be met in a manner that far exceeds an acceptable level. Initial submittals, along with additional material submitted, demonstrate that performance can be provided in an excellent manner. Weaknesses are not evident to any degree.

Good (3.0)

All aspects of the evaluation factor are addressed in a highly competent and logical fashion. Information clearly demonstrates that requirements can be met in a manner that exceeds an acceptable level. Initial submittals, along with additional material submitted, demonstrate that performance can be provided at a level above average requirements. Weaknesses, if evident, are insignificant.

Satisfactory (2.0)

All aspects of the evaluation factor are addressed in a competent and logical fashion. Performance capability is determined to be acceptable so that all requirements can be met. Any weaknesses will not seriously degrade performance and can be corrected with reasonable effort.

Marginal (1.0)

All aspects of the evaluation factor are addressed. Information provided demonstrates that only minimum requirements can be fully met. There is some concern that a satisfactory performance level can be achieved or sustained. Weaknesses or deficiencies are evident and may require significant considerable effort to correct.

Unsatisfactory (0.0)

Fails to address key aspects of the evaluation factor. Information provided indicates that minimum requirements cannot be met. Weaknesses or deficiencies are significant and will require major correction(s).

(d) Evaluation criteria for each factor are as follow:

Factor 1 - Technical compliance and capability factors with FAA Standard 019E

Purpose: It is critical that the offeror demonstrate the capability and ability to support the specification as it pertains to the various TVSS Surge Protective Devices (SPDs). The vendor must demonstrate the ability to support the systems in need of a SPD per the specifications and the testing requirements mentioned at Attachment J.1.

The vendor must demonstrate the ability to produce a quality SPD in accordance with FAA testing requirements.

Factor 2 - Past Performance

Purpose: It is critical that the offeror demonstrate/possess relevant past performance and experience in Surge Protective Devices. Evaluation will be made of the vendor's relevant past and present performance and experience on contracts of similar scope and complexity. The evaluation will consider information submitted pursuant to Section L of the SIR/RFO and past and present performance information acquired independently from other government and commercial sources. Note: Offerors with no relevant past performance or experience will receive a neutral score.

(Notes: (1) When an offeror has no relevant past performance and experience, a neutral score of "2" will be assigned; (2) A negative rating originating from completed Past Performance Questionnaires which results in a score below "2" for any factor or sub factor must be referred to the respective offeror for rebuttal opportunity).

Factor 3 0 - Cost/Price

(a) It is anticipated that proposed prices received resulting from this SIR/RFO will be determined fair and reasonable based on adequate price competition. The FAA will conduct a price analysis to determine price reasonableness based on competition. If reasonableness of price cannot be determined through adequate price competition or by other method(s) of price analysis, the FAA will evaluate additional information required as a result of Provision L.4 herein to establish price reasonableness.

(b) Proposals, whether initial or revised submissions, which are unreasonably low or high may be eliminated from further competition on the grounds of the vendor's failure to comprehend contract requirements.

(c) Proposals that reflect unbalanced prices may be eliminated from further consideration on the basis that such pricing may increase performance risk and could result in payment of unreasonably high prices.

M9.0 Risk Assessment

The FAA will assess each proposal based upon perceived risks to the FAA associated with the offer, to include, but not be limited to, the areas of past performance, technical competence and understanding of

the work requirements and reasonableness of offered prices to ensure satisfactory performance of any resultant contract.

M10.0 Best Value Determination.

The offer that provides the greatest overall value to the FAA will be selected for award. A technical/price tradeoff will be made. The lowest total evaluated price offer may not provide the greatest overall value to the Government. Best value will be based on the following:

- Technical Evaluation, to include Past Performance results and ranking of vendors.
- Cost/Price Evaluation
- Risk Assessment.

To arrive at a best value decision, the IPT and Source Selection Official (SSO) will integrate the source selection team's evaluation of the specific criteria described above. While the FAA source selection evaluation team and the SSO will strive for maximum objectivity, the source selection process, by nature, is subjective and professional judgment is implicit throughout the entire process.

M11.0 Single Award

Notwithstanding any other provision of this SIR/RFO, award of this contract will be made on the basis of "Best Value to the FAA", with technical being significantly more important than price. Multiple awards will not be considered.



**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

TEST PROCEDURES FOR SURGE PROTECTION DEVICE/ TRANSIENT VOLTAGE SURGE SUPPRESSOR (SPD/TVSS)

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1 PURPOSE

This document provides procedures for the testing of Surge Protective Devices/Transient Voltage Surge Suppressors for compliance with FAA-STD-019e, Section 4.2.2. "Lightning Protection, Grounding, Bonding and Shielding Requirements for FAA Facilities".

2 DEFINITION AND SCOPE

2.1 Definition

For the purposes of this document, a Surge Protection Device (SPD)/Transient Voltage Surge Suppressor(TVSS) is defined as all the elements required for the complete installation of an SPD unit and includes any fuses, circuit breakers, conductors and/or any other disconnecting means required for compliance with the National Electric Code (NEC) and other operational requirements.

2.1.1 Connection examples

There are two basic types of connection that can be used when installing SPD/TVSS: parallel or "T" connection, and "in Line" or "Y" connection. Examples of some of these connections are given in figures 1 through 5.

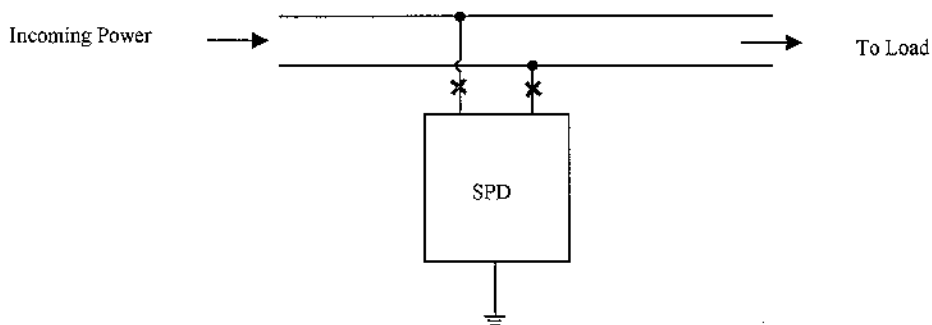


Figure 1 Basic "T" Connection

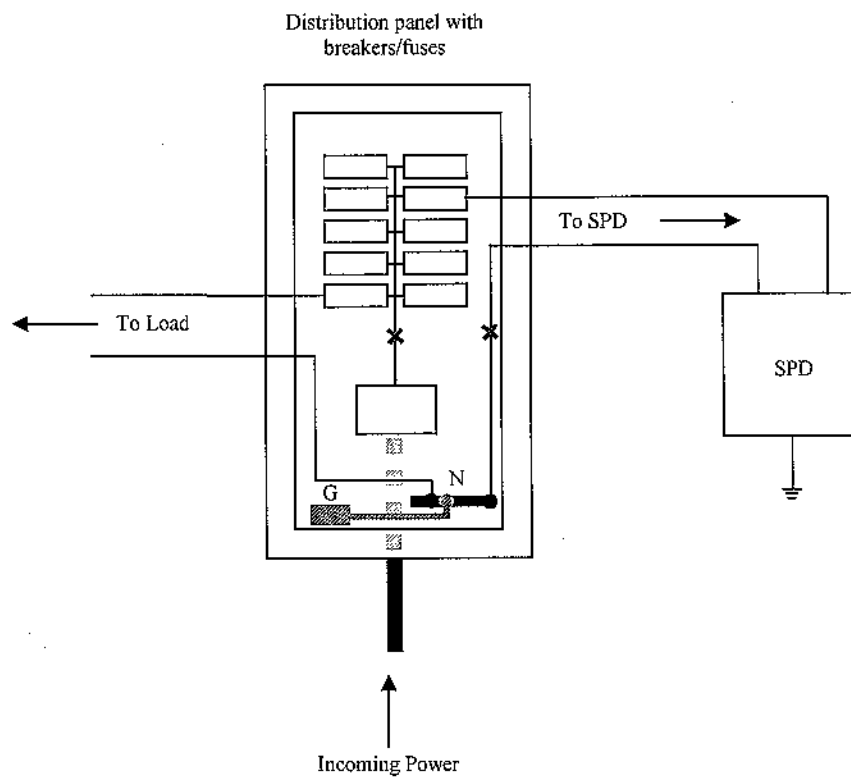


Figure 2 "T" Connection from Distribution panel via a dedicated Breaker/Fuse/Disconnecting means

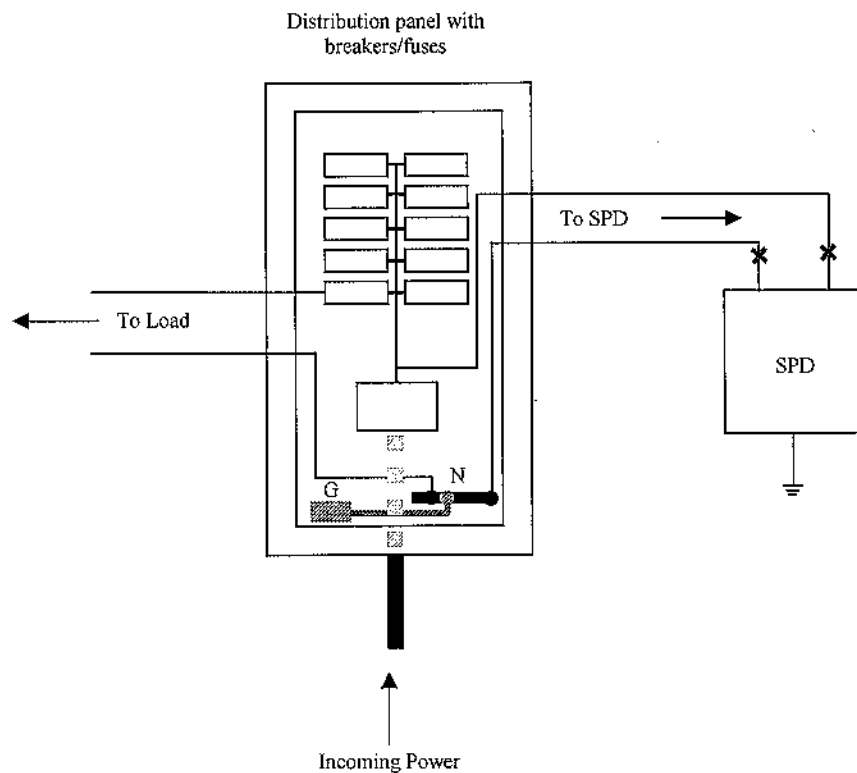


Figure 3 "T" Connection from Distribution panel via the main Breaker/Fuse/Disconnecting means

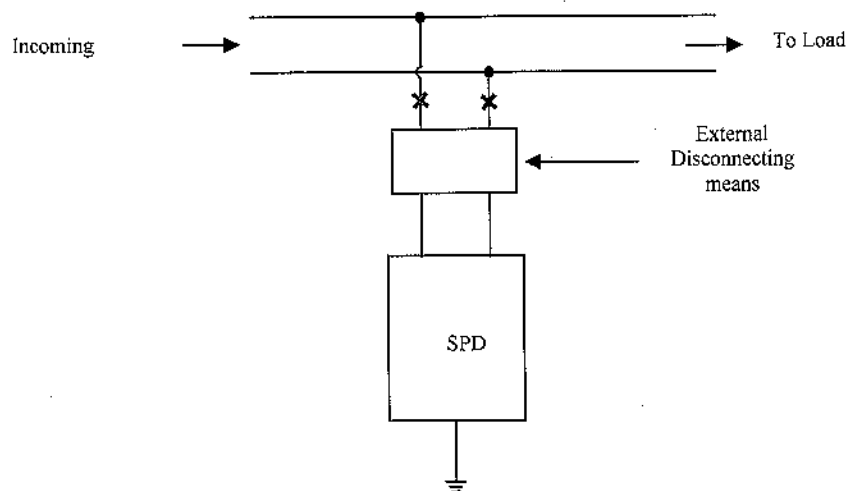


Figure 4 "T" Connection with external disconnecting means

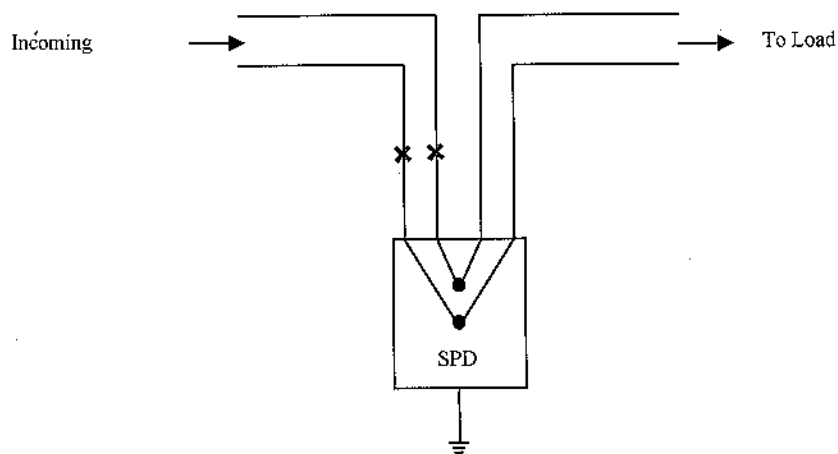


Figure 5 "Y" Connection

2.2 Scope

Tests detailed in Sections 4 and 5 will be applied to the device as defined in paragraph 2.1. For example, if a device is connected in “T” to a load or supply then any external connecting, isolating, switching and/or fusing means will be tested as an integral part of the assembly. Test connections shall be made as follows:

For tests of line-to-ground components the test shall be applied between each **X** point in turn and ground.

For tests of line-to-line components the test shall be applied between each **X** point in turn and the corresponding second line or Neutral also marked **X**.

If the SPD/TVSS contains internal connecting, isolating, switching and/or fusing means, as in some “Y” connected devices, test connections shall be made so that all test currents pass through the device.

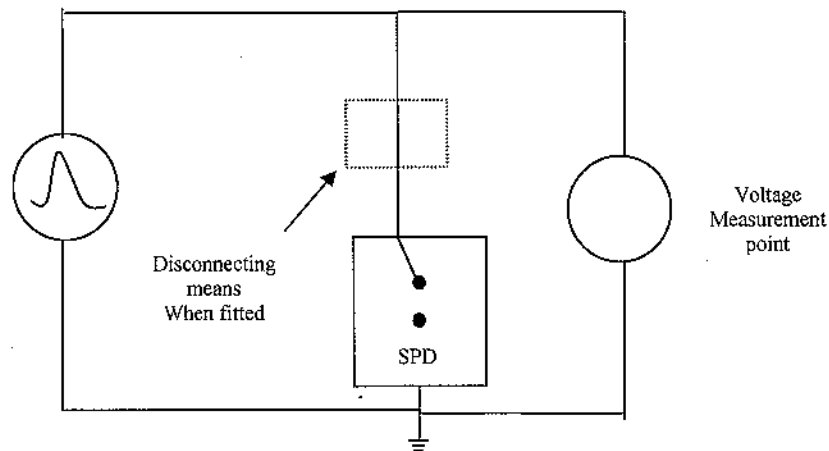


Figure 6 Test arrangement for Line/neutral to ground testing

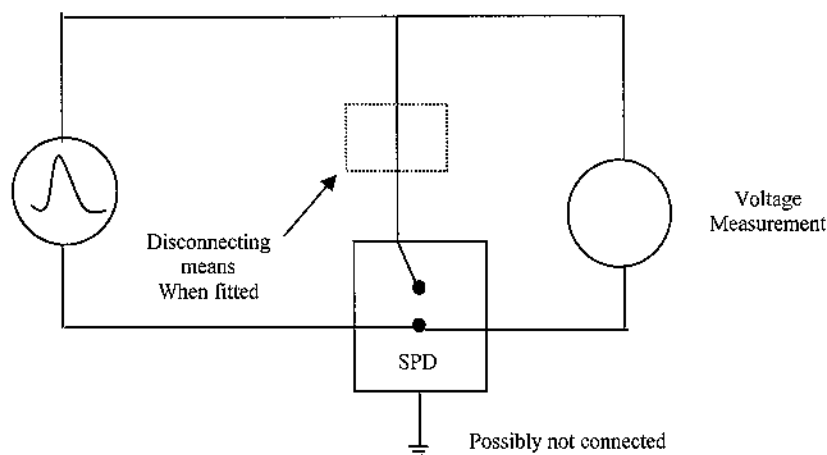


Figure 7 Test arrangement for Line to Line testing

3 LEAKAGE CURRENT"

3.1 Test Procedure

Leakage current is measured using a DC source. This source shall be connected to the device under test by an isolating, two-pole changeover switch with sufficient breakdown voltage so as to have less than 1 microampere of leakage during the test (Figure 6). In position 1 the switch will connect the device under test (DUT) to the DC source. In position 2 the switch shall isolate the DC source and connect a 1k Ω resistor across the terminals of the DUT. The SPD/TVSS shall be tested for each type of connection.

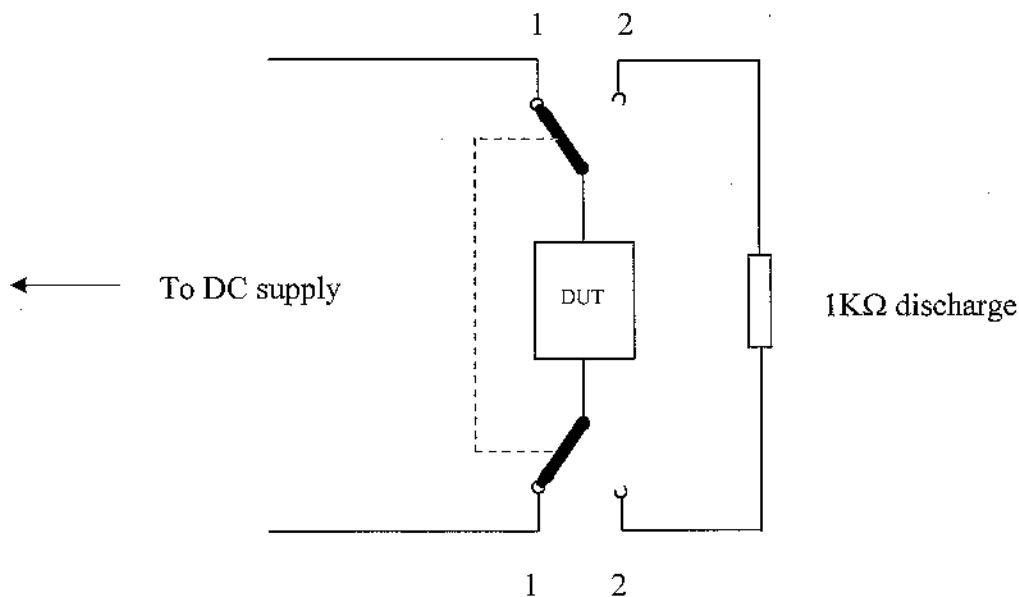


Figure 6 Test arrangement for leakage current measurement

With the switch in position 1 the DC source shall be increased in steps no greater than $V_n/10$ volts from $V_n/2$ where V_n = the nominal rms value of the system line-to-ground or line-to-neutral voltage. The voltage shall be increased until the steady state current is 1mA. Time must be allowed for the current to reach steady-state at each voltage step before a current measurement is taken. The time required to achieve steady-state current will vary depending on the capacitance of the unit under test and the internal resistance of the stepped DC source. A DC Hi-pot tester or a computer controlled DC source may be employed.

3.1.1 Stored Charge Decay

Directly after completion of the leakage current test the switch shall be moved to position 2. The voltage shall be noted on a 10M Ω or greater voltmeter. If this voltage is greater than 300V then the time for this voltage to decay to 95% of its starting value will be noted. The decay time must be no longer than 5 seconds.

3.1.2 Documentation of Test Results

The following shall be recorded:

1. V_{DCmax} : The voltage required to maintain a DC steady-state current of mA.
2. Discharge time : T_d
3. If voltage when switch is initially moved to position 2 is less than 300V, record this voltage and stop.
4. If the discharge time T_d is greater than 5 seconds record device failure and stop further tests.

4 SURGE CURRENT LIFETIME TEST

4.1 Test Procedure

WARNING:

During application of the surge, beware of ungrounded exposed metalwork.

The points of application of the tests are indicated in section 2 of this document.

Line to ground surges are applied between the incoming phase line and ground, that is, between one "X" point and ground as indicated in figures 1 to 5. If the surge generator used has a grounded side this side shall be connected to the designated ground of the surge protective device under test.

Line-to-line surges are applied between two incoming phase lines, that is between two "X" points as indicated figures 1 to 5. If the surge generator used has a grounded side this side shall be connected to one phase line of the surge protector under test and the ground connection of the surge protector left disconnected.

The generator used for the test shall deliver the waveform defined in Table I through the SPD under test. Table I specifies that the test the current waveform through the device shall be $8/20\mu\text{s}$ and the peak current through the device shall be as specified in this table for the test in progress. Generator calibration impulses may be applied into a short circuit. All values will be determined by direct measurement and not by calculation. For line-to-ground testing, the impulse will be applied with the unit powered at its normal operating voltage level. For line-to-ground testing of multi-phase units the line having the surge applied is required to be powered with AC at full phase-to-ground/neutral voltage. For line-to-line testing it is permissible to apply AC voltage to the line under test and AC ground to the line connected to the surge generator ground. The voltage applied must be equal to the normal line-to-line voltage.

As these tests are lifetime tests, a new sample is allowed for each level of test specified in Table I. However it is permissible to utilize individual phase SPDs of a unit containing more than one phase for as many lifetime tests as phases it contains provided that no components involved in the passing or dissipating of an impulse are utilized for more than one lifetime test. SPDs associated with phases not under test and any associated peripheral circuitry may be removed during the test of another phase. Devices involved in the passing of surge current during a lifetime test may be replaced before the next lifetime test. For impulse levels below 30KA subsequent impulses must be applied to the device under test within 60 seconds of the preceding impulse. For impulse levels of 30KA and above subsequent impulses must be applied to the device under test within 180 seconds of the preceding impulse. The device under test must be discharged (shorted momentarily) between each impulse.

It is important to start lifetime testing at the highest applicable levels shown above. Any operation of internal fuses, opening of fusible links, damage to any internal component, or

change in the clamping voltage greater than 10% at the end of a lifetime test, will result in a failure to meet the requirements of FAA-STD-019e.

Table I. Surge Current Lifetime Requirements

Surge Current Amplitude 8/20μs Waveform	Surge Number Lifetime Any Facility Entrance	Surge Number Lifetime Feeder and Branch Panels
10kA	1500	1000
20kA	700	500
30kA	375	250
40kA	50	25
50kA	8	1
60kA	6	
70kA	4	
100kA	2	
200kA	1	

Table II. (Reserved)

4.1.1 Outcome

Table I defines line-to-ground, line-to-neutral, neutral to ground, and line-to-line surge currents, and number of occurrences for AC services in FAA facilities below 600V. In this table, the 8/20 μ s wave form defines a transient reaching peak value in 8 μ s and decays to 50 percent of peak value 20 μ s after inception. These devices shall be able to tolerate surges of shorter duration without malfunction.

Each level of surge current and the number required represents a single lifetime of an SPD.

- (a) Any change greater than 10% in the 8/20 μ s clamping voltage at 3kA during service or when the pre life/service test and the post life or in-service test results are compared is a device failure. The pre life test value shall be taken as the 100% value.
- (b) Any change greater than 10% in the RMS voltage required to drive 1mA RMS through the device when the pre life/service test and the post life or in-service test results are compared is a device failure. The pre life test value will be taken as the 100% value.

- (c) Any change greater than 10% in the DC voltage required to drive 1mA DC through the device when the pre life/service test and the post life or in-service test results are compared is a device failure. The pre life test value will be taken as the 100% value.
- (d) Clamping voltages for each of the devices/assemblies/system voltages will be measured at 1kA and 10kA 8/20μs.

5. SLOPE RESISTANCE

It is the purpose of this parameter to specify a region on the SPD characteristic where it is possible to ensure device coordination. A slope resistance (the slope of the voltage/current characteristic of an SPD in its linear region) shall be calculated from the formula below:

$$R_{\text{slope}} = (V_{10} - V_1) / 9000$$

Where V_{10} = the clamping voltage measured at 10kA 8/20μs
and V_1 = the clamping voltage measured at 1kA 8/20μs

The values of V_{10} and V_1 used will be the absolute values as measured and not as a calculated value. The slope values shall conform to Table III.

Table III. Entrance, Feeder, and Branch Panels Slope Resistance Requirements

Location	Slope Resistance
Any Facility Entrance	$\leq 8 \text{ m}\Omega$ Maximum
Feeder and Branch Panels	$30 \text{ m}\Omega \pm 15 \text{ m}\Omega$

6. 3kA VOLTAGE V_3

The voltages that must be achieved during testing at 3kA with an 8/20 μ s current impulse is shown in Table IV. All voltages shall be measured at the device terminals. The time delay between the current and the voltage in the 8/20 μ s current impulse wave shape shall not exceed 1.25 μ S.

Table IV. Protection Voltages at 3kA

Location	System Voltage	V_3	Limit
Any Facility Entrance	208Y/120V 120/240V	400 L-N, L-G 700 L-L	Maximum
Any Facility Entrance	480Y/277V	700 L-L, L-G	Maximum
Any Facility Entrance	480V	1200 L-L, L-G	Maximum
Feeder and Branch panels	208Y/120V 120/240V	475 L-N, L-G 775 L-L	+/- 45V
Feeder and Branch panels	380Y/220V	1275 L-L, L-G	+/- 45V

7 ADDITIONAL TEST REQUIREMENTS

- i) Clamp (discharge) voltage
- ii) Overshoot voltage
- iii) Self-restoring capability
- iv) Operating lifetime
- v) Fusing

Compliance with each of the above items is tested and recorded during the lifetime tests. Initially a reference clamping voltage shall be measured by applying a 1kA 8/20 μ S impulse before the lifetime test commences. This measurement shall be repeated after each lifetime test and any change in the reference clamping voltage in excess of 10% prior to achieving the required number of surges listed in tables is deemed a failure to meet FAA-STD-019e. Operation of any overcurrent device, associated with the AC supply powering the device, during or after the impulse, will be taken as an indication of the failure of the SPD to self restore. This will result in a failure to meet the requirements of FAA-STD-019e.

Overshoot voltage will be measured using a measuring device with sufficient bandwidth and sampling speed (for digital equipment) that will allow at least 5 points to be taken in a 10ns period.

7.1 Outcome

The following shall be recorded:

1. Reference clamping voltage
2. Number and level of impulses applied
3. A sample waveform at the test current and clamping voltage
4. Overshoot voltage mean and deviation
5. Post test clamping voltage.
6. Measuring equipment details including bandwidth and sampling rate utilized.
7. For each test serial numbers and replacement parts used will be recorded.

When any of the following occur, the result shall be recorded and testing terminated:

1. Any variation in excess of 10% in reference clamping voltage at the end of a lifetime test.
2. Any early termination of test due to any component failure or end of life operation.
3. Any operation of fusing or disconnecting means.
4. Any resetting by manual intervention.
5. Overshoot voltage mean that is more than (2x Reference clamping voltage) for greater than 10 nanoseconds.
6. Failure to apply test pulse within the required time.